GUATEMALA

THE LAND OF THE QUETZAL



WILLIAM T. BRIGHAM

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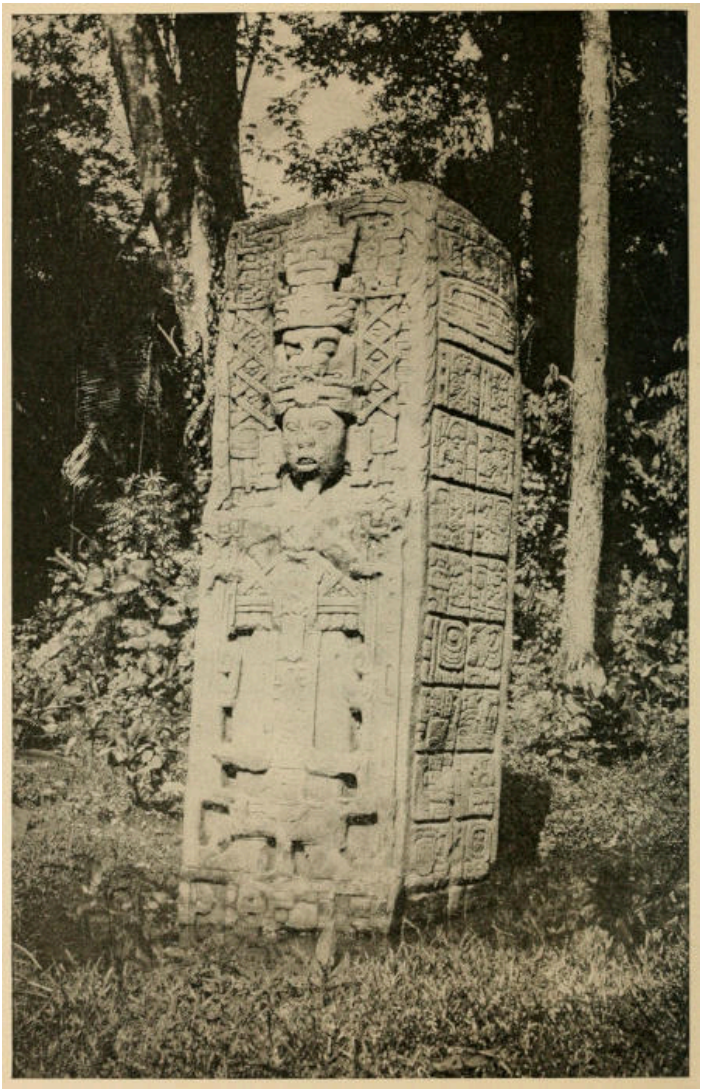
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GUATEMALA
THE LAND OF THE QUETZAL



MONOLITH ‘A’ AT QUIRIGUA.

GUATEMALA

THE LAND OF THE QUETZAL

A Sketch

By WILLIAM T. BRIGHAM, A.M.



NEW YORK

CHARLES SCRIBNER'S SONS
1887

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PREFACE.

A belief in the increasing importance of Central America, both geographically and politically, has led the writer of the following pages to collect for his own use and print for the use of others, notes made during three journeys in Guatemala and Honduras. He does not pretend to offer a monograph on Guatemala, nor to add to the general knowledge of Central America; but remembering the lack of guidance from which he suffered in travelling through the country, would in some measure save others from the same inconvenience. He seeks also, with perhaps more ambition, to awaken among Americans greater interest in the much-neglected regions between the Republic of Mexico and the Isthmus of Darien.

A land which was the cradle of civilization on this continent, and whose recently explored monuments are most justly claiming the study and admiration of archæologists in Europe as well as in America, has been strangely neglected by the American traveller as well as by the American merchant. Since the Travels of Stephens fascinated the public nearly half a century ago, the people of the United States have paid very little attention to Guatemala or its commerce. Even now there are thousands of square miles of wholly unexplored territory between the low Isthmus of Tehuantepec and the Lake of Nicaragua.

No country on the northern half of the American

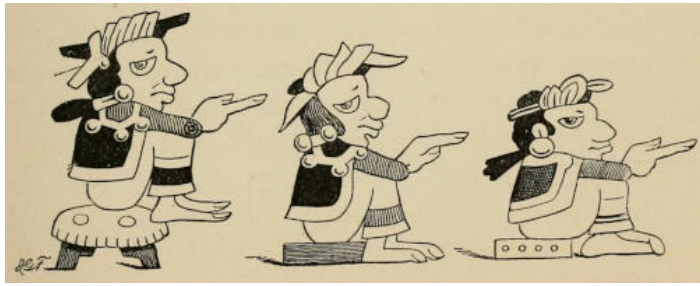
continent has a finer climate or more beautiful and varied scenery, or is a more attractive field for the genuine traveller. Valleys rivalling the paradises of the islands of the Pacific; uplands not unlike the plateau of the Indian Neilgherries; forests as dense and luxuriant as those of Brazil; lakes as picturesque as those of Switzerland; green slopes that might have been taken from the Emerald Isle; glens like the Trossachs; desert wastes that recall the Sahara; volcanoes like Ætna; and a population as various as in that land whence comes the Indian name,—all these features make but the incomplete outline of the Guatemaltecan picture. Then there is that charming freedom from conventionality which permits a costume for comfort rather than for fashion, accoutrements for convenience rather than for show. No dangerous beast or savage man attempts the traveller's life, no lurking danger or insidious pestilence is in his path. The hair-breadth escapes, more interesting to the reader than pleasant to the explorer, are rare here, and the rough places and the irritations from which no land on earth is wholly free, seem softened and vanishing to the retrospective eye.

Old travellers know how soon the individuality of a country is lost when once the tide of foreign travel is turned through its towns or its by-ways; and when the ship-railway of Eads crosses the Isthmus of Tehuantepec, when the Northern Railroad extends through Guatemala, when the Transcontinental Railway traverses the plains of Honduras, and the Nicaraguan Canal unites the Atlantic and the Pacific, the charm will be broken, the mule-path and the mozo de cargo will be supplanted, and a journey across Central America become almost as dull as a journey from Chicago to Cheyenne.

In the sober work to which this Preface introduces the reader, first impressions have been confirmed or corrected by subsequent experience, and flights of the imagination curbed by the truth-telling camera; from the published maps the most correct portion has been selected, and the statistics are from the Government reports. Many hundred photographic plates made by the writer during a period of three years have contributed to the illustrations of this book, so that accuracy has been secured. Where the plates are not direct reproductions from the negatives, the ink drawings have been made from photographic prints with care. There are no fancy sketches.

W. T. B.

BOSTON, *June 16, 1887.*



From an Ancient Manuscript.

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GUATEMALA

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GUATEMALA:
THE LAND OF THE QUETZAL.

CHAPTER I.
THE KINGDOM OF GUATEMALA.

That part of the North American continent usually known as Central America was included by the Spanish conquerors in the kingdom of Guatemala; and while my purpose is to describe the republic of Guatemala,—a portion only of the ancient kingdom,—I may be pardoned if I call the attention of my readers briefly to the geography and history of all that country which once bore the name and is still closely allied with the interests of Guatemala.

Central America should extend from the Isthmus of Tehuantepec to that of Darien; from the Caribbean Sea on the northeast, to the Pacific Ocean on the southwest. Mexico, however, has taken Chiapas and Yucatan, on the west and north, Great Britain has seized the east coast of Guatemala (British Honduras), and the Isthmus of Panama is included in the territory of South America. The present independent republics of Guatemala, San Salvador, Honduras, Nicaragua, and Costa Rica, constitute what is known as Central America,—a territory extending between 8° 10′ and 19° 20′ north latitude, and between 82° 25′ and 92° 30′ west longitude. In

length it measures between eight and nine hundred miles, while its breadth varies from thirty to three hundred miles. No competent survey has ever been made of this country, and even the coast-line is not always correctly laid down on the best charts. Maps have been made at haphazard in most cases, and very few positions have been scientifically determined. Government surveys along the lines of proposed canals or railways have not extended beyond a narrow line, usually in low regions remote from important centres. Dr. Frantzius[1] has published a very excellent map of Costa Rica; but most of the so-called maps published by or under the authority of individual republics are of no scientific value, the course of the principal rivers and the direction of the main mountain-chains being unknown. To illustrate the uncertain geography of Central America, let me give the extent and population as published by three authorities,—(I.) Lippincott's Gazetteer, (II.) Whittaker's Almanac, and (III.) the "Geografía de Centro-América" of Dr. González.

	Square Miles.	Population.
	I.	
Guatemala	40,777	1,190,754
Salvador	7,335	434,520
Honduras	47,090	351,700
Nicaragua	58,000	236,000
Costa Rica	21,495	180,000
	174,697	2,392,974
	II.	
Guatemala	40,776	1,500,000
Salvador	7,335	554,000

Honduras	39,600		300,000
Nicaragua	58,170		300,000
Costa Rica	26,040		200,000
	171,921		2,854,000
	III.		
Guatemala	50,600		1,200,000
Salvador	9,600		600,000
Honduras	40,000		400,000
Nicaragua	40,000	(1882)	275,816
Costa Rica	21,000		200,000
	161,200		2,675,816

Without surveys and without a proper census of the Indian tribes no scientific description of the country can be given. Humboldt's theory of an Andean cordillera has been disputed, and his mountain-chain has proved to be a confusing (but not confused) series of mountain-ridges. Yet it well may prove that the great naturalist was right; and so far as we now know from maps and personal observation, the vast earth-wrinkle which extends along the western border of our continent is a mountain-range of definite direction (about E. 20° S. to W. 20° N.) in Central America, and there occupying nearly the whole width of the continent. If we can picture to ourselves the formation in those remote ages, that it is the geologist's task to rehabilitate in thought, of a vast ridge, not sharp like the typical mountain range, but of broad dimensions like the swell of some vast ocean, we shall have the material then forming the earth's crust bent upwards, and in unelastic places broken, and this partly or entirely beneath the ocean. The rising land as the ages passed would be acted upon not only by the

ocean waves and currents, but by the torrential rains, which were of a force and frequency that even our water-spouts of the present age cannot equal. Cracks were widened, gorges were formed; and as the earth approached the present geological age, the gentler rains only supplied the rivers and lakes which now occupied the furrows ploughed deeply by primeval torrents. The rough work was done, the statue blocked out; and henceforth meteoric influences were merely to finish, add expression and polish to the work.

A traveller crossing this territory from ocean to ocean would sometimes follow the river valleys, then climb ridges, again traverse a plain, cross a valley, ride along another mountain-ridge, compassing a volcano, and finally descend abruptly to the Pacific. His direction had not changed, but the nature of his path had been wonderfully transformed.

Geologists know well that on one of these lines of disturbance, such as has been described, molten and disintegrated material is apt to come to the surface as lava and ashes; they expect also to find metallic veins, especially of the precious metals, and hot springs with various minerals in solution, and they infer earthquakes. All these phenomena are present in Central America in full force. Immense cones have arisen along the Pacific slope since the general features of the land were made, and not only have spread vast deposits around their base, but have blocked up valleys, forming lakes as Atitlan, built promontories as Coseguina, islands as Ometepec in the Lake of Nicaragua, and have turned rivers, changed prevailing winds, and otherwise altered the physical conditions of the country.

Gold sands from the disintegrated veins sparkle in

every mountain-brook, and the deposits of silver are no doubt as rich as those of Mexico, Nevada, and Potosi. *Aguas calientes*, or hot springs, are found all over the country, and earthquakes, often severe, are common on the Pacific slopes.

All along the Atlantic side the rock material is limestone or dolomite, while as one goes westward he meets andesyte and other forms of trachytic lava, such as pumice and obsidian. Even among the limestone mountains of the northeast are occasional volcanic deposits, exactly as might be expected when so extensive an upheaval has taken place.

Whatever has been the exact process by which this essentially mountainous country has been formed, we have at present at its northern boundary the high plain of Anahuac, extending from Mexico (where it is interrupted by the Isthmus of Tehuantepec) through Guatemala; of somewhat lower level in Honduras and Salvador; sinking to almost sea-level in Nicaragua (154 feet); and rising again in the Altos of Veragua to about 3,250 feet. This main range has its axis much nearer the Pacific shore and almost parallel to it, being in San Salvador distant seventy-five miles, and in Guatemala (Totonicapan) only fifty. Towards the Pacific the slope is steep, interrupted by many volcanoes; while on the Atlantic side the gently terraced incline is broken into subsidiary ridges extending to the very shores. In the oceanic valleys and along the coast are the only lowlands of Central America; and these contain the wash of volcanoes, limestone mountains, and ages of vegetable growth and decay, forming the richest of soils for agricultural purposes.

In Guatemala the mean height of the cordillera is about seven thousand, and probably the mean height

of this republic is not less than five thousand, feet. The Sierra Madre, or Cuchumatanes, in the Department of Huehuetenango, is the highest land (always excepting the volcanoes, which will be described later); and of the less important ridges are the Sierra de Chamá (of limestone, and full of caverns), which extends towards the northeast and ends in the Cockscomb Range of British Honduras; Sierra de Santa Cruz, also of limestone, extends nearly eastward, north of the Lago de Izabal and the Rio Polochic, and south of the Rio Sarstun; Sierra de las Minas, nearly parallel to the last, and separating the valley of the Rio Motagua from that of the Polochic. Of this range is the Montaña del Mico and the peak of San Gil, near Livingston: the material is no longer limestone, but metamorphic rock, containing mines of some importance. Last we have the Sierra del Merendon, which forms the boundary between Guatemala and Spanish Honduras; and with various names it finally ends in the Montaña de Omoa on the coast,—an important landmark several thousand feet high.

The mountains of Salvador are all volcanic and shoreward of the main chain; but in Honduras the lines again repeat the general arrangement of Guatemala, while the names are many, indicating a more broken system. Between the ranges are broad and fertile valleys, the Llano de Comayagua being forty miles in length, with a breadth of from five to fifteen miles. In Nicaragua the ridges slope towards the southwest, breaking abruptly to the Mosquito coast, and an important part of its territory is occupied by the lakes of Managua and Nicaragua. From the broad valley the land again rises towards Costa Rica, where it attains the height of forty-three hundred feet, and, owing to the narrowness of the

continent, the lateral branches are insignificant. From the table-land of Veragua the cordillera dwindles to the basaltic ridge of Panama.

Transcriber's Note: image is clickable for larger version



CENTRAL AMERICA.

Rivers are, next to mountains, the most important factors in the physical aspect of the land; and in Central America they are abundant, though, from the broken nature of the country, not of great size. From the position of the backbone of the land, most of the watershed is towards the Gulf of Mexico and the Caribbean Sea; even the great lakes of Nicaragua, which are really on the Pacific side, empty through the Rio San Juan into the Atlantic, the river taking

advantage of a break in the cordillera. The lower or navigable portion of the Central American rivers is the only part known; the sources of even the largest streams are still unexplored. So tortuous are the courses that names are multiplied, and rivers that flow from inhabited valleys through wild forests again appear in the lowlands as unknown strangers; and the river that one traveller describes as important and navigable, because he sees it in the season of rain, the next visitor may cross knee-deep, and know only as a brook.

On the Pacific side may be mentioned the Rio Lempa, which rises near Esquipulas, receives the waters of the considerable Lago de Guija (on the boundary of Guatemala and Salvador), and even after the dry season is of large volume, thirty miles from its mouth attaining a breadth of more than six hundred feet and a depth of ten feet, which is nearly twenty-seven when the floods of the rainy season occur. If it were not for the bar, which has hardly a fathom of water, the navigation would develop rich lands on either bank. The Rio Paz, the Rio de los Esclavos, and the Rio Michatoya are not navigable, although formerly the latter stream at its mouth (Istapa) was large enough within the bar to admit the construction of vessels of moderate size; it was here that the Spaniards fitted out several fleets.

Far different are some of the rivers that find their way into the Atlantic. Chief among them all is the noble Usumacinta, which flows into the Gulf of Mexico through the Lago de Terminos, and is navigable many miles through a singularly fertile and interesting country, as beautiful as fancy pictures the cradle of the human race,—a land seldom visited by white men, and the home of the unconquered and

unbaptized (La Candones) Indios. The swift Chixoy, the Rio de la Pasion, and the almost unknown San Pedro unite to form this “Child of many Waters.”

The Belize River, rising in the Montaña de Dolores near Peten and crossing the British colony, is the principal highway for the commerce of Peten, the pitpans bringing down huge mahogany bowls, paddles, baskets, and other Indian goods. The Sarstun forms the southern boundary of the British possessions, and is navigable for small canoes as far as the rapids of Gracias á Dios. None but timber-cutters disturb its solitudes. The Polochic is at present the most useful river of Guatemala. It rises near Tactic, and is a foaming torrent for much of its course in Alta Verapaz. At Pansos the waters are navigable for light-draft steamers, except in very dry seasons; and not far below, its volume is materially increased by the Cahabon. It flows through the Lake of Izabal, and, as the Rio Dulce, empties into the Gulf of Amatique over a bar of sand. The Motagua is nearly parallel to the Polochic, and rises near Santa Cruz del Quiché. From Gualan it is navigable in canoes. Smaller streams are the Ulúa, Aguan, and Segovia in Spanish Honduras, which are navigable for pitpans. Finally we have the San Juan, known as one of the elements of the “Nicaragua Canal” route, but not at present navigable for boats of any size.

All the rivers of Central America that can be used for commerce require a special river service; for wherever the depth of water is sufficient, the always-present bar cuts off access to vessels drawing more than six feet. Should the development of the country warrant it, the bar of the Rio Dulce could be deepened sufficiently to admit vessels drawing ten or fifteen feet.

Small lakes are common enough in the northern part of Central America. The Laguna del Peten is about five hundred feet above the sea, nine leagues long and five broad. The Lago de Atitlan, in the Department of Sololà, is sixteen and a half miles long from San Lucas Toliman to San Juan, and eight miles wide from San Buenaventura to Canajpú, and soundings show a depth of a thousand feet. With the Laguna de Amatitlan, this will be described in the Itinerary. Of Honduras, the chief lakes are the Laguna de Caratasca, or Cartago, close on the Atlantic coast, thirty-six miles long by twelve wide; the Lago de Yojoa, between the Departments of Comayagua and Santa Bárbara, twenty-five miles long and from five to eight wide; the Lago de Cartina, eighteen miles by eight, and the Laguna de la Criba, fifteen by seven miles. Of all the lakes of Central America, none is so interesting commercially as the Lake of Nicaragua. It is large (ninety miles by forty), and the largest south of Lake Michigan. Of a depth sufficient for all vessels (forty-five fathoms in places), and connected with the Atlantic by the Rio San Juan, with the Lago de Managua (thirty-five miles by sixteen), by the Tipitapa, it has the serious disadvantage of being a volcanic basin, whose bottom may at any time be elevated above the surface,—as in the case of the volcano of Ometepec. Whether the channel between these two lakes is permanent, is a matter of some doubt, as travellers have lately found no water flowing from Managua. The Lago de Guija, between Guatemala and Salvador, is seventeen miles long from east to west, and its mean width is six. Fishes and alligators abound, and its waters—which are not of the best quality—discharge through the Lempa to the Pacific. Another lake in Salvador has attracted attention in

late years by a curious volcanic disturbance in its midst; Ilopango will be described with the volcanoes.

With this bare list of some of the prominent features of the country, we may join a brief account of those other natural and political characteristics of what was once Spain's stronghold on this continent that have most immediate relation to the present inhabitants. Leaving Guatemala for a separate chapter, the other four republics may be described as follows:—

Salvador.—The smallest in extent, but by far the most populous, having no less than sixty-three inhabitants to the square mile. The central part is an upland of a mean elevation of two thousand feet above the sea, bounded on the Pacific side by a chain of volcanic peaks; beyond these a strip of lowland from ten to twenty miles wide. Eastward and westward are two great depressions, San Miguel and Sonsonate, "the place of a hundred springs" (*centsonatl*). The Gulf of Fonseca, fifty miles long and nearly thirty wide, is said to be the most beautiful harbor on the Pacific coast. On the southwest side is the principal port of La Union, a town of little more than two thousand inhabitants, and unhealthful, as are all the Pacific ports. The mean temperature is 80° Fahr.; and were it not for the capital commercial facilities of the town, its inhabitants would be few. Libertad has an open roadstead, and a population only half that of La Union. Acajutla lies between the headlands of Remedios and Santiago, and has but five hundred inhabitants; as the port of Sonsonate (distant five leagues), however, it is much frequented, and is provided with an iron pier, as is Libertad. In 1882 the first railway in the republic was opened, from Acajutla to Sonsonate, a distance

of fifteen miles; and work has since been slowly progressing in the direction of Santa Ana.

Mines of gold, silver, copper, lead, iron, and anthracite coal are found within the borders of Salvador, the principal being those of Loma-Larga, Corozal, Devisadero, Encuentros, and Tabanco.

The capital was founded April 1, 1528, by Jorge de Alvarado, brother of the conqueror of Guatemala; but ten or twelve years afterwards it was removed to its present site in the valley De los Hamacas, where it has been many times ruined by the terrible earthquakes to which this region is especially subject.

The republic is divided into fourteen departments, twenty-nine districts, and two hundred and twenty-eight towns.

Departments.	Principal Cities.
Santa Ana.	Santa Ana (25,000).
Ahuachapan.	Ahuachapan.
Sonsonate.	Sonsonate (8,000).
La Libertad.	Nueva San Salvador (Santa Tecla).
San Salvador.	San Salvador (30,000).
Chalatenango.	Chalatenango.
Cuscatlan.	Cojutepeque.
La Paz.	Santa Lucia (Zacatecoluca).
San Vincente.	San Vincente (10,000).
Cabañas.	Sensuntepeque.
Usulutan.	Usulutan.
San Miguel.	San Miguel.
Gotera.	Gotera.
La Union.	San Carlos (La Union).

The legislative power is exercised by two chambers,—one of Deputies, the other of Senators; each Department elects a senator and a substitute, each District a representative and his substitute. The executive power is in the hands of a citizen elected as President by the people directly; should there be no election by an absolute majority of votes, the General Assembly elects from the three citizens who have obtained the greatest number of votes. Three senators are designated as heirs-apparent. The term of office is four years, without immediate re-election. The judiciary is similar in order and functions in all these republics, and will be described as in Guatemala. The organized militia numbers about thirteen thousand men; and in case of invasion, war lawfully declared, and internal rebellion, all Salvadoreños between the ages of eighteen and fifty are liable to military duty.

In 1879 the number of primary schools was 624 (465 boys', and the rest girls'); and these were attended by 20,400 boys and 4,038 girls, at a probable cost of $150,000. There is a central university, with faculties of Law, Medicine, Theology, and Civil Engineering, and it has branches at Santa Ana and San Miguel.

There are six hundred and ninety-three miles of telegraph, with forty offices; and the service is reasonably well performed by the Government officials. A railroad between Santa Tecla and the capital, and five hundred and nine leagues of cart-roads, afford communication; and there are lines of stages subsidized by the Government.

In 1879 the imports were $2,549,160.19, and the exports $4,122,888.05; the income $2,914,236.29, and the expenditures $2,785,068. The funded debt

was $1,945,201, the floating debt $392,777.11, and there is no foreign debt.

Salvador is essentially an agricultural state, and coffee, indigo, balsam, tobacco, rice, cacao, sugar, rubber, and other less important products are produced abundantly from her fertile fields.

Honduras.—The third republic of Central America covers an area of about forty thousand square miles. Its boundaries are seen on the map, and its surface is diversified with high mountain-ranges, broad and fertile valleys, vast forests, and plentiful streams. Its climate is extremely hot on the coast; but in the mountain region, as at Intibucá, the temperature is low. Never so hot as a summer in New England cities, and not so cold as to check a most luxuriant vegetable growth, the traveller has an alternation of spring and summer as he changes his level, irrespective of the astronomical year. Four hundred miles of Atlantic coast-line, dotted with river-mouths, bays, and ports; sixty miles on the Pacific side, in the secure Gulf of Fonseca,—seem to provide ample commercial advantages; and to make these of use are the following resources: vast plains in Comayagua and Olancho, covered with excellent grass, pasture large herds of cattle, thousands of which are shipped each year to Cuba.[2] The forests, which occupy much of the Atlantic coast-region and the lower mountain-slopes abound in mahogany, rosewood, cedar (*Bursera*), logwood (*Hæmatoxylon campecheanum*) brazil-wood (*Cæsalpinia Braziliensis*), sarsaparilla (*Smilax*), and other marketable products; the principal timber regions being on the rivers Ulúa, Aguan, Negro, and Patuca,—all on the Atlantic side. In mineral wealth Honduras easily outranks all her sister republics. Silver ores are exceedingly

abundant, chiefly on the Pacific slopes; and among them are chlorides of remarkable richness. Gold washings occur in Olancho, and are now worked by several foreign companies. Copper deposits are often mingled with silver; iron exists as magnetite,—sometimes so pure that it may be worked without smelting; antimony, tin, and zinc also have been reported. Beds of lignite are found in the Department of Gracias; and here too are the Hondureñan opals. Fruits of many kinds are now grown in the neighborhood of Puerto Cortez, such as bananas, plantains, coconuts, pines, for which there is a constant demand from the steamers which come here from New Orleans. Of indigo little is now exported; but the production of tobacco is increasing. Especially fine is the leaf grown near Copan, rivalling, when properly cured, the best product of the Cuban valleys; but the common cigars, which are sold for eight dollars per thousand, are dear even at that price. In 1879 the importations were valued at about one million dollars, and the exports twice that amount. In later years these exports have largely increased. A railroad of narrow gauge extends from Puerto Cortez to San Pedro,—thirty-seven miles; and while the republic is sadly deficient in cart-roads, it is only fair to say that the authorities are doing something to improve these very necessary means, in the expectation that the country is to develop as it deserves.

The government is very like that of Salvador, and the administrative departments are:—

Departments.	Chief Cities.
Islas de la Bahía.	Coxen Hole (Roatan).
Yoro.	Yoro.

Olancho.	Juticalpa.
Paraíso.	Yuscaran.
Tegucigalpa.	Tegucigalpa (12,000).
Choluteca.	Choluteca.
La Paz.	La Paz.
Comayagua.	Comayagua (10,000).
Santa Bárbara.	Santa Bárbara.
Gracias.	Gracias.
Copan.	Santa Rosa.
Colon.	Trujillo.

Public lands are abundant, and are granted to actual settlers of any nationality at low rates, provided they will cultivate them. The towns are all small, although some of them were flourishing sixty years before the settlement of Jamestown in Virginia. Of the more important are Tegucigalpa, the capital, in the midst of a plain some three thousand feet above the sea, and surrounded by a mining region. It possesses a Universidad Central, founded in 1849 by Don Juan Lindo, then President. Comayagua was founded in 1540 by Alonzo de Cáceres, also in the midst of a plain, where still are visible the monuments of antiquity,—the less perishable works of a people more energetic than their successors; for with the exception of some few churches, little of the work of the present inhabitants would survive three centuries of occupation by a foreign invader. Amapala, on the Island of Tigre, in the Gulf of Fonseca, was formerly a favorite rendezvous of the buccaneers, Drake making it his base of operations in the South Sea. Now it is no less desirable as a port, having deep water close to shore. Puerto Cortez, or Puerto Caballos,—as Cortez called it, from the death of some of his horses here,—on the north coast, in

latitude 15° 49′ N., and longitude 87° 57′ W., was selected by Cortez as the *entrepôt* of New Spain, under the name of Navedad. For more than two hundred years it was the principal port on the coast; but dread of the buccaneers caused the removal to Omoa. The bay is nine miles in circumference, with a depth of from four to twelve fathoms over its principal area; and on the northern side, where the water is deepest, large ocean steamers may come to the wharves. Omoa, in latitude 15° 47′ N. and longitude 88° 5′ W., has a smaller harbor, defended by the Castillo de San Fernando. Trujillo, an ancient port on the western shore of a noble bay, is now growing in importance with the development of Olancho, of which it is the natural seaport; but it has no wharf or any sufficient landing-place for merchandise.

The Bay Islands are small, but of considerable importance. Roatan, the largest, is about thirty miles long by nine broad, and in its highest part nearly a thousand feet above the sea. Guanaja, or Bonaca, the first land of Central America discovered by Columbus on his fourth voyage, is fifteen miles from Roatan, and of an extent of five by nine miles. This group is fertile, and with a fine climate should prove very attractive to settlers from the North who appreciate the waste of life in an arctic climate of eight months each year, when all vegetation ceases to grow, and man himself can be kept alive only by artificial heat, where the farmer must toil wearily four months for the poor produce that is to sustain him all the “famine months,” and the laborer live poorly all the twelvemonth, whatever be his work.

The history of Honduras has not been a happy one, even since its revolt from the Spanish yoke in 1821,

and revolutions have been the rule; but in 1865 a new Constitution was adopted, with some prospect of internal quiet. The four hundred thousand inhabitants include perhaps seven thousand whites, the Spanish population being mainly on the Pacific side, Caribs along the Atlantic coast, and several thousand of the mixed races, the great majority being Indios, known as Xicaques and Poyas. Perhaps the most adverse influence to the progress of this naturally rich republic, next to the revolutions, was the scandalous loan for building the "Honduras Inter-oceanic Railway" from Puerto Cortez to the Gulf of Fonseca, a hundred and forty-eight miles. This loan, amounting in 1876 to $27,000,000, was as complete a swindle as has ever disgraced American finances; but the people of Honduras, although responsible for the debt, had little to do with its origin, and cannot rightly be blamed for not paying interest on what they never had any advantage from. The internal debt is about $2,000,000.

Nicaragua.—Of nearly the same area as Honduras, Nicaragua is chiefly distinguished by its lower level and the great lake which offers so inviting a route for an inter-oceanic canal. The same fertility and genial climate extend from the Hondureñan uplands into Chontales and Segovia, where Northerners can enjoy life; but it is hot and unwholesome near the sea, especially throughout the Mosquito Reservation, where the frequent river-floods and the miasmatic marshes breed an endemic fever very fatal to Europeans. The mean annual temperature (excepting the highlands) is about 80° F., falling to 70° at night, and rising to 90° in the hottest weather. The seasons, as elsewhere in Central America, are two,—the wet from May to November, the dry including the winter months. At Rivas, on the isthmus between the Lago

de Nicaragua and the Pacific, the annual rainfall is about a hundred and two inches; elsewhere the summer rainfall is about ninety, and the winter less than ten.

Geologically, Nicaragua is no less rich than Honduras in variety of structure and mineral possibilities. The volcanic formations on the extreme West are rich in pumice and sulphur, while across the lake are andesyte, trachyte, greenstone, and metalliferous porphyries, succeeded by crystallized schists, dolerites, and metamorphic beds, extending, so far as is known, beneath the alluvial deposits of the coast-region. The Chontales gold mines have been worked for some time near Libertad, and so have the silver mines of Matagalpa and Dipilto; but the total annual yield of precious metals seldom exceeds $200,000.

The chief articles of export are cacao, hides, coffee, and gums, as well as gold and silver bullion; and in 1880 the exports amounted to $2,057,500, and the imports to $1,475,000. The revenue for this year was $2,435,000, while the expenditures slightly exceeded it. All Nicaraguans between the age of eighteen and thirty-five are in the army.

For more than half a century Nicaragua has been darkly distinguished above all other countries of the world by war and bloodshed. Military *pronunciamientos*, civil war, and popular revolts have so exhausted all the resources of this rich country that it is quiet at last from utter exhaustion. Could these fermenting republics be induced to give up their absurd and expensive military establishments, and expend the money, now worse than wasted, in opening roads and teaching the people something besides military drill, the prosperity of this

wonderfully fertile and agreeable region would be assured. Only their revolutionary habits now stand in the way of the introduction of foreign capital; and are not these habits fostered by the constant military display which guards the President and judges alike? It is certainly foreign to all Northern ideas to have a court of justice guarded by military sentinels. Would that this Eden might be reclaimed, the swords beaten into ploughshares, and the generals and other officers turn their wasted energies to agriculture and commerce!

Nicaragua is divided into the following departments, according to the census of 1882:—

Departments.		Chief Cities.	
Managua	12,000	Managua	7,800
Granada	51,056	Granada	16,000
Leon	26,389	Leon	25,000
Rivas	16,875	Rivas	10,000
Chinandega	17,578	Chinandega	11,000
Chontales	27,738	Libertad	5,000
Matagalpa	51,699	Matagalpa	9,000
Nueva Segovia	36,902	Ocotal	3,000
San Juan del Norte	2,000	Greytown	1,512
Mosquitia	36,000	Blewfields	1,000

These figures cannot, however, be relied upon for the population. With a coast-line of two hundred and eighty miles on the Caribbean Sea, the only port is San Juan del Norte (Greytown), formed by the northern branch of the delta of the San Juan; and this is now nearly choked with sand. The Pacific coast is bold and rocky, extending nearly two

hundred miles from Coseguina Point to Salinas Bay, and has several convenient harbors, as San Juan del Sur, Brito, and, best of all, Realejo. Among the chief cities is Leon, founded by Francisco Fernandez de Córdoba in 1523 in Imbita, near the northwest shore of Lago de Managua, whence it was moved in 1610 to the present site at the Indian town of Subtiaba. Managua, the capital of the republic, was nearly destroyed in 1876 by a land-slide, but is now rebuilt. Granada is the collegiate town of the republic, and is on the shores of the great lake. A railway has long been in process of construction to connect the capital with the ocean. In 1882 the telegraphic system of eight hundred miles was completed, and eighty-one thousand despatches were forwarded the preceding year through twenty-six offices. In 1882 the total attendance at the national schools was only five thousand, or less than eight per cent of the whole population. The annual grant for the purposes of education was $50,000.

The Mosquito coast cuts from Nicaragua a large portion of her shore-line, precisely as British Honduras robs Guatemala of hers; and this has been a cause of serious trouble. This territory, which is about forty miles wide, had been under the protection of Great Britain from 1655 to 1850, when that very un-American document the Clayton-Bulwer treaty gave England certain rights in her colony of Belize in exchange for such claims as she had to this coast, and by the treaty of Managua, in 1860, she formally ceded her protectorate to Nicaragua; but there are still several disputed points.

Costa Rica.—The fifth and most southern republic of Central America has an area of only twenty-one thousand square miles. The Atlantic coast is low, and

the country is covered with a dense forest, while the Pacific slope is characterized by wide savannas, or *llanuras*. Between these borders are high volcanoes and an elevated table-land three to four thousand feet above the sea,—the latter almost the only cultivated land in the State. The forests are largely composed of very valuable trees,—mahogany, ebony, brazil-wood, and oak; and the usual tropical fruits grow well. Coffee, however, is the staple export, being grown extensively in the neighborhood of San José and Cartago; the soil most favorable being dark volcanic ash, from three to eighteen feet deep. The amount exported in 1874 was valued at $4,464,000; in 1885 the amount is placed at $4,219,617.

On the Atlantic side Puerto Limon is the chief commercial town, and on the Pacific, Punta Arenas. In 1871 the Government negotiated a loan in London of $5,000,000, and the next year another of $12,000,000,—but from both of them never received more than $5,058,059.60,—with the avowed intention of building an inter-oceanic railway between the two principal ports; but only detached portions have been built,—twenty-four miles from Alajuela to Cartago, sixty from Limon to Carrillo, and six from Punta Arenas to Esparta. The country is bankrupt, and makes no attempt to pay any part of its liabilities; indeed, its revenues, derived from intolerable duties (even on the export of coffee), monopolies of spirits and tobacco, national bank, sales of land, and internal taxes, do not balance the expenditures.

The legislature is composed of a Congress of Deputies,—one for each electoral district,—holding office six years, half being renewed every three years. The members of the Corte de Justicia are

elected by Congress. The present constitution (from 1871) is the seventh that has been in force. The departments are,—

Departments.		Chief Cities.	
San José	45,000	San José	15,000
Cartago	36,000	Cartago	10,000
Heredia	30,000	Heredia	9,000
Alajuela	29,000	Alajuela	6,000
Guanacaste	8,000	Liberia	2,000
Punta Arenas	6,000	Punta Arenas	1,800

The population is estimated by M. Belly.

Both the northern boundary on Nicaragua, and the southern one on Columbia, are in dispute.[3]

I have endeavored to give most briefly the chief matters of importance relating to the four republics that, with Guatemala, constitute Central America. I am well aware that I have turned, that I can turn but little light on the darkness; too little is known of the country, beyond its trade and political relations to the rest of the world. Volcanoes, earthquakes, and revolutions have popularly been associated with the whole region, and public taste has been turned away from such unpleasant outbreaks of subterranean fires or human passions. The time will come when these regions, far more fertile and accessible than those African wilds that for a score of years have interested, strangely enough, both explorer and capitalist, will claim the attention due their natural merits; and the fertile plains will be the garden and orchard of the United States,—not necessarily by political annexation, but by commercial intercourse.

All our sugar, all our coffee, all our rice, all our chocolate, all our india-rubber ought to come from Central America, where these products can be raised better and cheaper than in any other country; and next to these staples, the subsidiary fruits, as oranges, plantains, bananas, pines, limes, granadillas, aguacates, and dozens of others now unknown to commerce, ought to come to us from Limon, Puerto Cortez, and Livingston. These are to be obtained in Guatemala of better quality and in better order than in the West Indies. Louisiana would then perhaps give up the unnatural cultivation of sugar, and Florida cease her useless striving to raise really good oranges, and both States turn to the products they are better fitted for raising.

I will ask you to go with me through the republic of Guatemala, and to see it, so far as you can, with my eyes; and until that journey is ended, we will leave the story of the old times, the present system of government, the ethnology, the volcanoes, the flora and fauna, to chapters by themselves, even if the unsystematic arrangement should savor strongly of the irregularity of the land we journey through.



Luciano Calletano (Captain at Chocon).

CHAPTER II.
THE ATLANTIC COAST AND ITS CONNECTIONS.

As the steamer anchors far from the shore at the port of Livingston, the traveller sees almost exactly what the Spaniards saw,—earth, sky, and sea, so little change have four centuries wrought on the outer shores of Guatemala. Northward are the picturesque hills of British Honduras, backed by the blue summits of the Cockscomb range; southward the majestic San Gil, bearing like another Atlas the clouds on his broad shoulders; eastward the low Cays, covered with the feathery coconuts; before him the shore, here marked by a long limestone cliff crowned by the palm-sheltered houses of the Caribs, while farther to the westward rise the Santa Cruz mountains. The yellow waters of some great river lave the vessel's sides; but no break is visible in the landward horizon.

For a while all is as it was when Hernan Cortez, in the year 1525, came to this shore after his terrible march from Mexico. There was even then a little village on the high bluff; and he found two of his countrymen gathering *sapotes* (*Lucuma mammosa*) to save the little colony of Spaniards, a few leagues farther south, from starving. Waiting in the early dawn for the landing-boats, I cannot but recall the ancient times; imagination sinks the great steamer into the little caravel, and the feelings of the *conquistadores* are mine for the time. Soon the white

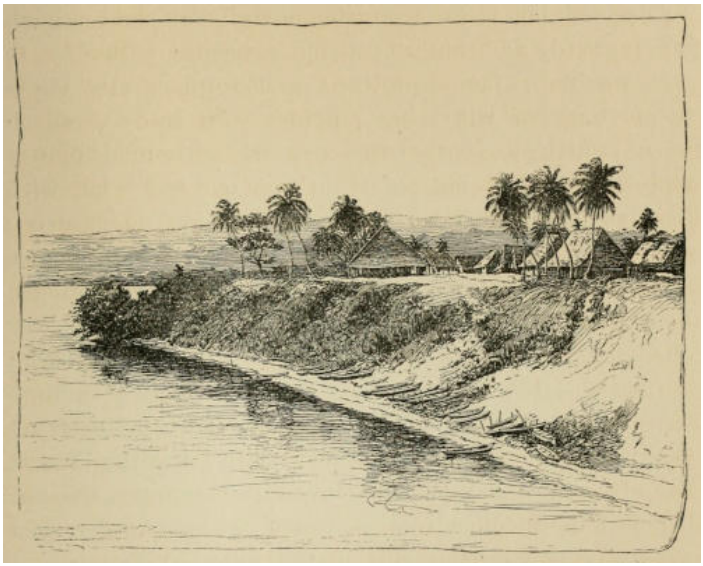
sails drop out from the foliage, the canoes are seen rapidly approaching, and the chatter of Caribs, both men and women, banishes all daydreams.

The “Progreso,” once a Buzzard Bay racer, sails rapidly out and takes on board her cargo,—my friend, his mother, and myself, and traps of no light weight. Her bows are soon turned landward, and as she glides along, all the features of the shore unfold, —the coco-palms of marked luxuriance, the thatched houses with shining white walls, the limestone cliff almost covered with convolvulus and other foliage, the narrow beach, the canoes of various size and shape. We turn a point, and the town of Livingston is before us, and we are in the mouth of the Rio Dulce.

On the shore the only prominent building is the custom-house, built before Livingston was declared a free port; and in front of this is a low, dilapidated wharf, at which our tender landed us, the water being not more than fifteen inches deep. The tides here are less than a foot, so that shoal-water keeps boats of any size at a distance, making landing difficult. It was comforting to know that a charter for a wharf had been obtained, and that our successors may land with greater ease.

We did not find the heat greater than on the steamer in the offing, and even the necessary bustle and trouble in getting luggage transferred to the backs of men did not cause discomfort. The custom-house and a few offices occupy the front of an amphitheatre with very steep sides, above which is the town. Springs burst from the gravel and furnish pools for the washerwomen, whose sturdy, yet graceful forms, barely concealed by their scanty garb, are very attractive. Some stood in the clear pools, others bent over the washing-stones, some

played with their children in the water, while others climbed the steep path to the town, carrying a head-burden of great weight.



Barrack Point, Livingston.

Our abode was on the Campo Santo Viejo, the burial-hill of former days, and right across our path lay the empty tomb of a son of Carrera, the former President of Guatemala; as we passed this we noted the admirable mortar with which its bricks were laid, —so strong that no brick can be cut out whole. On this resting-place of perished Caribs the foreign inhabitants of Livingston dwell. It is the west end of the town, and overlooks both the river and the native town, where are also the stores and the hotels.

All descriptions of a growing town must be unsatisfactory, so rapidly does the population and topography change; and a few words may convey all the geographical knowledge needed. Rolling ground, which might easily be drained, but is not; streets

generally at right angles, none paved, and most of them exceedingly muddy in wet weather; fences of the rudest form, mostly sticks bound together with vines; houses with walls of adobe or of wattle, in both cases covered with mud plaster and whitewashed, none of them over one story, but with high roofs thatched with palm; yards, but no gardens; stores here and there built of boards from New Orleans, and occupied by foreigners,—French, Germans, Italians, Americans (*del Norte*); a dilapidated chapel on or among the neglected foundations of an intended church; beyond this the barracks on a beautiful point; children of all ages playing in the dirt and merrily greeting the passer-by with their black, shiny, healthy faces; palm-trees, mangoes, sapotes, bread-fruit, oranges, anonas, bananas, and coffee-trees scattered without order, and wholly uncultivated,—make the external features of this place. No vehicles are in the streets, though a few horses roam untethered through the town. Every burden is carried on the heads of men or women. The house-doors are all open; but the interior is generally too dark to disclose much of the inner mysteries to the stranger. Westward from the town lies the new Campo Santo, and beyond this the almost impenetrable forest.



A STREET IN LIVINGSTON.

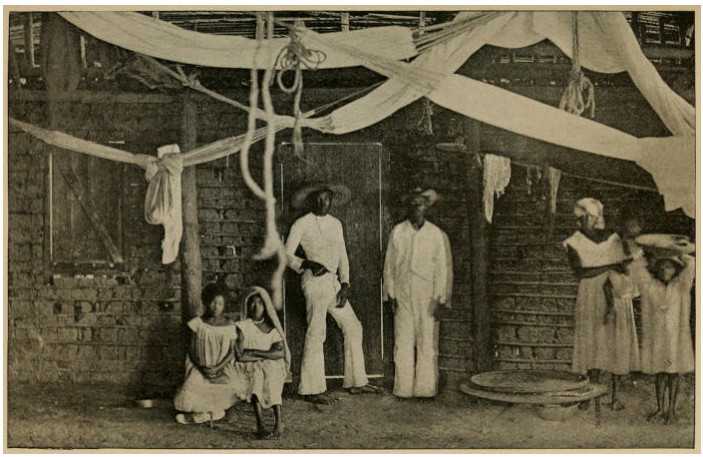
The situation of Livingston is good,—at the mouth of one of the finest rivers of the Atlantic coast of Central America. The climate is very healthful and agreeable, and the frequent communication by two lines of steamers with New Orleans, one line with New York, and another with Liverpool, make it an important business-centre. All the fine coffee from Alta Verapaz and the fruit from the plantations on the Chocon and Polochic is shipped here; and the product might be indefinitely increased. The drawbacks are a bar with only a fathom of water at the mouth of a river navigable otherwise for many miles by the largest steamers, no wharves, little enterprise on the part of the native inhabitants, and a frequent sea-breeze in the afternoon, which sometimes makes landing through the rough water on the bar unpleasant. The population is about two thousand, chiefly Caribs; and long inaction and complete lack of enterprise have produced a people poor and careless of riches if obtained at the price of labor. As in all similar places, there is no lack of

adventurers of the lowest character.

All this matter is not, however, learned at once, and observation must be depended on rather than report; for the merchants of Livingston see the prospects of their town in very different lights when talking with a mere visitor or with a possible rival in the small but very profitable business. As a stranger, I was told that the place was an el dorado; that limitless crops grew without urging from a soil of unequalled richness; that the climate was salubrious, and eternal summer reigned; that business was brisk, and constantly increasing under wise laws and a favoring government. As a settler, the song was sung to me in a minor key: labor was not to be had; no good lands could be obtained; the steamers were the tyrants of the place, and all earnings were eaten up by freights. Then there were the warning cries of those unfortunate men who wanted to make money in a newly opened country, but had not the necessary courage and endurance for a pioneer. They had not met success, and they had not grit enough to seek it. Micawbers far from home, they waited for something to turn up.

The process of finding out about the place was not an unpleasant one; it was what we had come for, and we began it the first day at breakfast. While we lodged in our house on the hill, we took our meals—with the exception of early coffee and rolls—in the town at the house of Señor Castellan; and they were in genuine Hispano-American style. Eleven o'clock is the hour for *almuerzo*, or breakfast, and thus the time for ceasing work and taking the needed midday rest. Late in the afternoon came the *comida*, or dinner,—differing from breakfast only in the occasional provision of *dulces*, or sweetmeats. The *menu* was

constant; an oily soup, beans black or white, beef or chicken stew with chillis, fish, bread, and coffee, formed the almost unvarying round. Our waiters were two little boys,—one the son of our host, the other his ward. With our coffee we generally had fresh milk; but when the supply of this failed, a can of condensed milk took its place. Not infrequently the sugar also failed; and then one of the boys ran to the nearest store and bought half a pound of a coarse brown kind, and replenished the saucer that did duty as sugar-bowl. No supply of anything was ever kept in the house.



INTERIOR OF A CARIB HOUSE.

Our dining-room was dark,—the only light coming from the open doors at either end. There was but the earth, hard trodden, for the floor, and the furnishing was simple enough,—a rough table and half a dozen rickety chairs. A tablecloth served also for napkins, and the dishes were of many patterns, colors, and degrees of dirtiness. It seemed absurd to call for a clean plate; but we did so, to see what would happen. Besides our own party of four, we had a

padre and an Italian as fellow-boarders; and a little observation of the habits of these polite friends helped us much in our new circumstances.

A large tame duck used to waddle under my chair, and at last would take bits of tortilla from my hand. Several mangy dogs and cats had to be driven out whenever we sat down to eat; but the hens were not disturbed, for they contributed so much to our larder that they were privileged, and one nested in an old felt hat on a corner shelf, while another came cackling out of one of the dark bedrooms that opened on either side. In spite of all these drawbacks, we liked the cookery, and did ample justice to it.

As the ancient Romans in their luxury had entertainment for the eye as they reclined at meat, we in our simplicity had a constantly moving panorama at our street door. Stout Carib women, straight as one could wish, walked by, with every burden, however insignificant, balanced on the head. Half a pound of sugar or a dose of salts would be placed above the turban as surely as would a heavy jar of water or a house-timber. Some fine forms, both of men and women, made part of this procession; and the latter wore garments short at either end, fastened over one shoulder only, and displaying the bust perfectly. A soldier came along once in a while, but only his cap and musket told his class. Boys wrestling but seldom fighting, dogs fighting for a bone,—all helped us to prolong our meal. It was difficult to make the boys understand that they must not spit on the floor as they handed us the dishes. A large brick oven in the courtyard furnished bread for a number of families, and good bread.

In our walks about the town we were often politely

invited into the houses, and so had a chance to see the cassava bread making. The tuberous roots of the manioc (*Manihot utilissima*) often attain a weight of twenty or thirty pounds, and are full of a poisonous juice, deadly when swallowed. A mahogany board is provided, into which broken crystals of quartz are inserted, and this serves to grate the root into a coarse meal, which is washed carefully (the starch is partly removed, and settles in the water as tapioca), and is then placed in a long sack of basket-work, called very appropriately *serpiente*. This ingenious press is fastened at one end to a house-beam, while on a lever placed through the loop at the other end all the children of the family sit in turn, or together if they are small; and the squeezed mass is dexterously made afterwards into flat loaves about three feet in diameter, and not more than a quarter of an inch thick, dried, and then baked. The result is a wholesome and very nutritious bread, which keeps a long time and is capital on an excursion. Later on, when our own housekeeping was in order, we found it made excellent puddings, and was better than crackers in soup; while in the woods it was indispensable. It is also a capital diet in dyspepsia, can be eaten in sea-sickness when all other food is rejected, and serves to fill out the bony outlines of an emaciated human frame better than anything else. The clean white loaves can be easily exported, and are very attractive. Fine oranges we bought from a tree in the yard of our cassava-maker at ten for a medio (five cents).



GRATING CASSAVA.

The fine view from the fort can be seen in the illustration; but as Frank and I stepped over the low wall and set up the camera to photograph it, we attracted the attention of the officer in charge, who at once ordered us to come to him. A convenient temporary ignorance of Spanish delayed us until the view was secured and a squad of soldiers sent to arrest us, when the officer wanted to know what we were “telegraphing in the fort for.” With a very few words I exposed his ignorance to his soldiers, who laughed as heartily at him as if they had not been quite as stupid as he; and he begged us to leave at once. Of this same garrison it is related that some years ago a French corvette anchored off the point and fired a salute. The first gun was all right; but the second astonished the valiant soldiers, and at the third they all threw down their guns and fled to the bush, fully convinced that an attack on the village was intended. After a while boys were sent out into the woods to tell these warriors that it was safe to come home. The lighthouse here, which all incoming

vessels are taxed to maintain, consists of a stout pole; but the lantern has been broken, and not replaced.

Below this military post is the usual landing-place for canoas. These are nearly all dug out of single mahogany or cedar logs, and are not only well made, but of good form. Some are forty feet long and six feet wide. The paddles were of mahogany, and the women paddled as well and powerfully as the men; both, indeed, seemed to be quite at home on the water.

Some of the incoming canoes were laden with coconuts, others with bananas and plantains from the little *fincas* along the coast, and yet others with fish. The last we noted more carefully, as there is no fish-market in Livingston, and the fish are always interesting to a stranger; for odd and various as may be the fruits of a new clime, the produce of the sea generally surpasses that of the land in curious forms. There were some of the oddest of the Central American waters; and the man who first ate them must have been very brave or very hungry. One of them had flesh resembling beef in color, and good and substantial when cooked.

Paths about the town are narrow and grass-grown, and the hooked seeds of a *Desmodium* cling to the clothes, and the thorns of the sensitive-plant (*Mimosa pudicans*) scratch the bare feet of the passer; but worse than all these, in the grass are tiny insects called *coloradía*, which bite the ankles and other exposed parts, causing red spots and an intolerable itching,—easily allayed, however, by salt-water or bay-rum applications. Mosquitoes were not troublesome, and we used no nettings; nor did we see any house-flies.

A bath in the Rio Dulce was tempered by the dread of sharks; and refreshing as the sweet water was, there was a self-congratulatory feeling on getting safely back to the huge square-hewn mahogany logs that served for dressing-room.

To the outward world Livingston is principally interesting as the free port of Guatemala,—the outlet of the coffee of Alta Verapaz and the fruits of the Atlantic coast-region. In its early history it was a settlement of Caribs,—those splendid negroes who were driven from the islands of the sea, which still bear their name, when the Spaniards enslaved or destroyed their fellow-owners of the land. Its situation at the entrance of the chief waterway to the interior and the capital soon marked it for a Spanish post; but the buccaneers were too powerful, and before their advance the port of entry was moved far up the Rio Dulce to Izabal, on the lake of that name, —the fort of San Felipe blocking the way to these lawless enemies. Not only pirates, but the Home Government hastened the decay and disuse of this port, and the banks of the Rio Dulce were of little importance, except to the mahogany-cutters and sarsaparilla-gatherers, for two centuries.

An enlightened Government, in fostering the immense agricultural wealth of Guatemala, turned the attention of foreign capital, first to the rich coffee-lands in the neighborhood of Coban, and later to the even richer fruit-lands of the valleys east of the high table-lands of the interior. The outlet for all the produce was by the Polochic, and the shipping-port was Livingston; so the little village built by the exiled Caribals (cannibals) has been gradually occupied by business men of various nations, until now the population may be nearly two thousand.

The shores are high and healthful, and the anchorage within the river is secure. Dredging would easily open a channel, and jetties like those placed in the Mississippi by Captain Eads would doubtless keep the way open; for the current is frequently very strong, but now wastes its strength over a mile of shoal-water. At present all the ocean steamers lie at anchor outside; and consequently the lighterage is an important business.

In the immediate neighborhood of this port, and accessible by water, are lands pre-eminently adapted for sugar or cotton cultivation; although now, owing to the smaller capital required, and speedier returns, bananas and plantains are the chief products. The Government determined to develop these lands,—which have hitherto been left to the solitude of their dense forests and the occasional intrusion of the mahogany-cutter,—and in 1882 declared Livingston a free port, including in its territory a large triangular part of the eastern coast. The public lands were then offered for sale at reasonable rates; and in consequence, several capitalists from the United States have purchased large tracts, and are cultivating soil perhaps the most fertile on the continent.

Climatic changes are insensible here, and it may truly be said that the one season is summer. Never has yellow fever or other dangerous zymotic disease visited Livingston, and the death-rate is about one quarter that of Boston. The rapid increase of its population and commercial importance will make imperative the demand for improved harbor and wharf facilities.

Ten miles to the south of Livingston is the fine harbor of Santo Tomas, where in 1843 a Belgian

colony was established; and as this unfortunate attempt has given an ill reputation to all Central America, it is well to state that failure was by no means due to the insalubrity of the climate, but to the want of foresight of the projectors and the abject ignorance of tropical trials on the part of the immigrants. Landed in an unaccustomed climate, in the wet season, without shelter, and inadequately provisioned, they lost heart, health, or life itself.



WEAVING A SERPIENTE.

Pioneers and frontiersmen should not be recruited from shops and counters. The pluck and caution needed for a struggle with untried conditions, the determination to be content with slim comforts and undaunted in the face of every discouragement, looking always to the final result, experience shows cannot be found in this class. They do well enough as eleventh-hour assistants, when the strong men have felled the forest and broken the ground and built houses and shops for these weaker but still useful brothers; but the first colonists must be of sterner stuff. Probably, had shelter and good food been

provided for those inexperienced Belgians, there would have been at Santo Tomas something more to-day than the memory of their visit.

In 1881 the little town contained but one hundred and twenty-nine inhabitants, mostly fishermen; but the construction of the Ferro-carril del Norte, to connect the capital with the Atlantic, changed for a time the sleepy hamlet into the busy haunt of contractors and laborers. The exigencies of the railroad calling for the deepest water, however, the new town of Port Barrios has been founded, some three miles to the eastward of the ancient village. Curiously enough, the Bay of Santo Tomas has no river; but it lies between the Rio Dulce and the Motagua.

From Livingston to New Orleans the distance is 900 miles; to Belize, 125; to Kingston, Jamaica, 800; to Puerto Cortez (Caballos), 55; to Izabal, 45; to Pansos, 90; and to Guatemala City (water to Izabal, and mule-path thence), 120. The usual steamer time from New Orleans is six days, including a stop of two days at Belize; from New York, ten days, including stops at Kingston and Belize; and three days should be ample to New Orleans, seven to New York, and eight to Boston. A glance at a map will show that the course as well as the distance between Livingston and New York is much in favor of that route over the better-known one from Aspinwall to the metropolis; and when to this saving of time and avoidance of the dangers of navigation is added the greater facilities for raising and shipping fruit which Livingston is now developing, there is great probability that New Orleans will not long be allowed to absorb all the bananas, plantains, and pines, or England all the coffee and mahogany, shipped at Livingston.

The natural advantages of a port and the conveniences of trade between that and other countries are of small moment if there is nothing beyond the port; and one must look well into the interior of the country to see its poverty or richness. Before crossing the republic, the fruit-lands of Livingston are worthy of exploration. The little plantations at Cocali, on the coast northward, and those along the banks of the Rio Dulce, are easily seen, and in their present condition offer nothing new or especially interesting. Bananas and plantains are almost the only product of commercial importance; for the pines grow wild, cassava, bread-fruit, mangoes, and sapotes are not exported, and the coconut is native on the shores.

No systematic cultivation is known in this region, and the crops grow very much as they did in the Garden of Eden. Plantation-work consists of clearing the land of forest (which is done in January and February), allowing the felled trees to dry, burning in May, and planting in June. No plough ever furrows the rich ground, and the hoe is sufficient for the planter's needs, while most handy for the laborers. As may be supposed, the labor of keeping the crops clear of weeds is considerable, but not so great as on our Northern farms; for although the vegetable growth is very rapid, the country is as yet free from foreign weeds. With us the most rapidly growing and pernicious weeds have all been imported; and on the Hawaiian Islands the vegetable growths that have laid waste thousands of acres of the best pasturage are the lantana, verbena, and indigo, not one of them indigenous. In the course of years cultivation may bring these agricultural curses; but at present the Guatemalan planter in Livingston has only palms, canes, ferns, ginger, and other easily eradicated

plants to contend with.

Indian corn (*maiz*) is planted in slight holes made with a stick and covered with the foot, and seed planted on Thursday has been found four inches high on the following Monday. The stalks are sometimes seventeen feet high, and average three ears each; only ninety days are required to mature the crop, which is gathered three times each year. Upland rice is scattered broadcast on the soil, and the straw grows six feet high, with generous heads, yielding the finest rice known; two crops can be raised each year. Sugar-cane has been found to yield three tons of sugar per acre for twenty years without replanting,—a result unknown in any other sugar-country. At present there are no mills in eastern Guatemala, and only enough cane is planted to supply the demand for eating, or rather chewing.

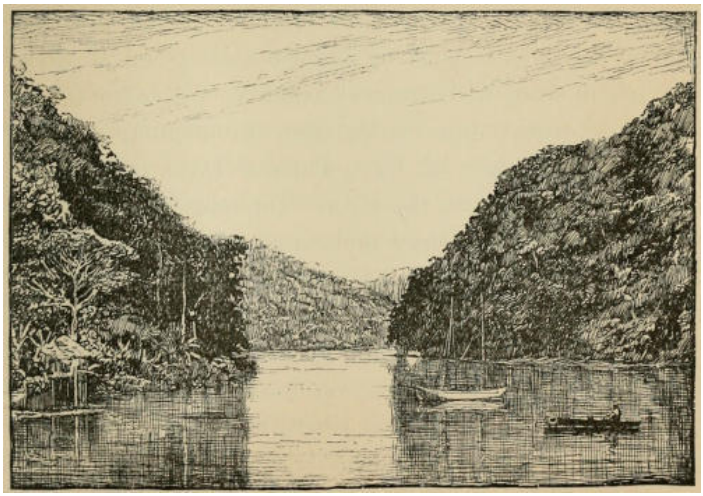
Bananas have within the last ten years become very common all over the United States, and every one is familiar with the imported varieties; but few are aware that the varieties grown in the tropics exceed two hundred, many of them too delicate to bear transportation, and as far superior to the common sorts as a choice table-apple surpasses the cider-apple of our New England pastures. The kinds of banana most raised near Livingston are the same as those of Aspinwall; but the quality is superior. Plantains are grown even more commonly than bananas, and the domestic consumption is much greater. Among Northern fruit-dealers the banana and plantain are frequently confounded; but they are as different as pears and apples. To grow either, simply requires planting of suckers, which in nine months should bear a bunch of fruit. The stem is now cut down, and from its base sprout several suckers,

all over three being removed for planting elsewhere. It is only necessary to remove the finished stem and extra suckers to insure crops for a long series of years. No attempt has been made to use the valuable fibre, of which there is an average of three pounds to a stalk.

When we turn from what is done here to the consideration of what may be, the interest vastly increases; and to this end let the reader join us in an exploration of one of the rivers flowing from a valley of great extent and unrivalled fertility, but covered with forest, and unknown save to the mahogany-cutters and an occasional huntsman. The Rio Chocon is almost unnoticed on the maps, and its source unknown; but it probably rises in the Santa Cruz mountains.

In the middle of October, 1883, the “Progreso” was manned and provisioned, and in the early afternoon we were on board waiting for the sea-breeze to help us up the river. The light wind served to carry us across the Rio Dulce, but no more; and anchoring, we sent three men ashore to lay in a supply of plantains, bananas, coconuts, and sugar-cane. Travelling in the tropics is usually far from luxurious; and our present outfit was no exception to the rule. Our captain had provided a Jamaica negro for cook, Santiago, a half-breed, for *montero*, or guide in the forest, and our crew consisted of Guillermo, an attractive looking but bad boy, who was always singing about his *corazon* (heart), Francisco, and two other men, whose exact ethnological classification was a puzzle. Our cook, his oil-stove and canned provisions filled the little cabin; but the cock-pit was large, and Frank shared with me one side, while the captain occupied the other, and at night we had a

canvas awning over the whole. Folding-chairs served for beds as well, and our traps were put into the capital water-proof baskets called *petácas*.



Entrance to the Rio Dulce.

Later than usual the breeze freshened, and we were sailing apparently for the spur of San Gil, which stretches northward right across the river. As we advanced, the walls opened, and we entered a gorge far finer than that of the Saguenay; for the savage cliffs of the wild Canadian stream are here replaced by white limestone precipices jealously covered with palms and vines, until only here and there could the rock be seen under or through its richly colored mantle. The river is deep, in places eighteen fathoms, and, except in the overhanging trees, there was no place to land on either side for some distance.

Frank shot at a fine pelican, but only broke a wing; and although he pursued the wounded bird rapidly in a little *cayuco* that we had in tow, he did not gain on the powerful swimmer until a shot from the

“Progreso” killed the fugitive, whose remains measured seven feet across the wings. Other birds tempted us, but the fast-waning daylight warned us against delay; and as darkness fell upon us with tropical rapidity, we came to the lake-like Golfete, nine miles from Livingston, and anchored for the night off Cayo Paloma (Dove Island), the only inhabited spot on the river. Our crew went ashore for shelter, and we retired under our substantial awning, which protected us from the rain which fell in torrents during the night. We had found no mosquitoes at Livingston, and there were none here; so our sleep was not broken until our boys came on board before daybreak. Where we had entered this beautiful lake we strangers did not know; and even when the direction was ascertained, the opening of the river was invisible. Coconut-palms and bananas will give a charm to any landscape; yet the little Cayo Paloma hardly needed them, so beautiful was it in itself.

Grand San Gil brushed the clouds from his forehead and looked down smilingly upon us in promise of a fair day as we sailed up the Golfete. A short league brought us to a curious limestone rock on the northern shore,—a regular cube, rising from deep water, and capped with a pyramid of foliage. So unusual a formation could hardly have failed to attract the aboriginal mind; and there may be on the summit some remains,—a sacrificial altar, or stele. We did not go near enough to see any way of access; but the branches seem to hang low enough on one side to promise an entrance to an active climber, and we determined to try it some other day when we had more time.[4]

If the entrance to the Rio Dulce was well

concealed, that to the Rio Chocon was still harder to find; and but for the rock island, one might try several apparent openings in the hedge-like border of the stream before entering the canal that sweeps in a semicircle into the actual river. Two alligators sat, like the porters at an Egyptian palace, opposite each other at the entrance, but dropped incontinently into the stream before our rifles were ready,—giving us an unpleasant reminder of what we might expect should we take a bath in the cool river. From animal to vegetable was but a glance; and the musky odor of the reptiles faded into the fragrance of a large purple passion-flower, which hung so low that we slipped into the *cayuco*, Frank and I, and paddled from bank to bank in the little mahogany dug-out, pulling down branches and vines, shaking out lizards and beetles, while humming-birds of almost every bright color, and butterflies of hues seldom seen in cooler climates, would hardly leave the fragrant flowers we gathered. Nothing could be seen beyond the river, for we were in a green lane bordered by all the tropics can produce of vegetable life; and as the day wore on we felt the weariness of seeing. A little white passion-flower (*P. Brighami*), with curiously clipped leaves, three kinds of morning-glory, a crimson abutilon, and a host of plants whose family alone was known to us, had been consigned to the plant-press. At first there were no palms; but as we ascended the stream, which was in flood, the banks at last appeared, growing gradually higher, and only on solid ground could the palms find foothold. The cohune (*Attalea cohune*), with its long clusters of hard oily nuts, came first; then a small pinnate-leaved, graceful, but unknown species; then an astrocarya, with dreadful spines and hard but edible nuts; and finally, on the rocky banks, slender, long-

stemmed species, and a climbing palm that, like the rattan, attained a length of several hundred feet. Our first glimpse of the family in full force was at the junction of the two mouths of the Chocon. Here there is an enlargement of the river into a lagoon, and the eastern branch looks as large and easily navigable as that we had entered. At another time we found this was the case. Bambus bent their graceful stems in clusters over the water, and here and there tall reeds in blossom waved their light plumes against the dark-green trees behind them.

With the drift floating down stream we noticed queer green things which were evidently vegetable; but what else? At last we came to some sapoton-trees (*Pachira*); and it was their fruit, now ripening,—like in size and appearance to a husked coconut,—that furnished our puzzle. The fruits split while on the tree, and drop the nuts, which are about as large as a hen's egg, into the water, where they soon germinate, and float about with expanded cotyledons until caught on some shoal, or at the bank, where they take root.



EL RIO CHOCON.

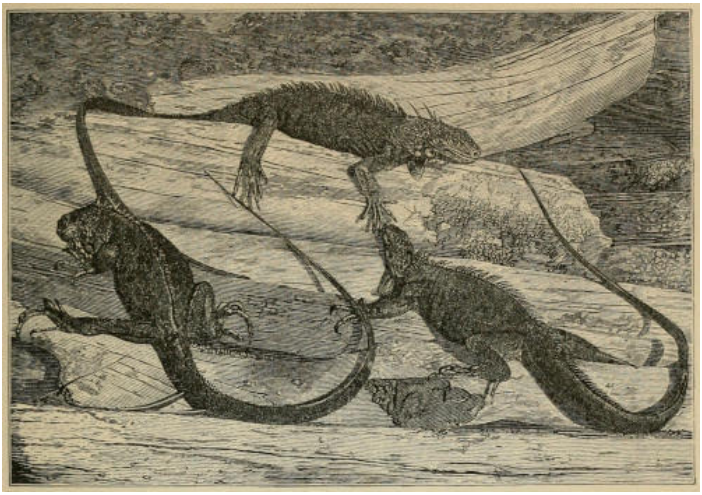
Not once all day did we see a place to land; indeed, until we had ascended the river several miles there was no land, so high was the flood. Dense foliage, suitably defended with spines of palm and the no less unpleasant thorns of the guilandina and sarsaparilla, hid what might be disagreeable of animal life along shore; and as we could not land, neither could we plunge into the cool river,—that was already engaged by the alligators.

As the sun dropped behind the trees we made fast to a large post in midstream, starting a whole family of little leaf-nosed bats out of a woodpecker's hole in this dead tree; and as our *comida* was being laid, I explored more carefully this curious mooring. Water-logged and stranded on the bottom, some twenty feet below us, it was a perfect image of life in death; for every part above the water was covered with a luxuriant growth not its own, and yet perfectly in place. On one side clung three different orchids in seed, a cluster of peperomias in blossom, and a fine cereus, while mosses and ferns quite covered the interstices. We did not at that time know the naughty habits of the bright little bats,[5] or we should not have slept so quietly; as it was, the mosquitoes were very thick, and only our veils protected us.

It was a strange bed-chamber. The river, black beneath and around us, was silent enough; for the current hardly rippled against our boat, no wind moved the leaves, and only our own voices broke the stillness while we waited for sleep. Suddenly a sound between a shriek and a roar burst almost over our heads. "Tigre," muttered Frank as he felt for his rifle. It was only a lion-bird; but its terrible cry was repeated until it seemed to awake all the nocturnal

noises of the forests that stretched for fifty miles around us. Howling monkeys (*Mycetes ursinus*), a shrill water-bird, hooting owls, were all easily distinguished by our *montero*; and we slept more tranquilly after his explanation, even though we thought we felt the rough back of an alligator scrape the bottom of our boat. I have heard the real tiger's howl in the Sumatran jungle; but it was not so terrible as this wretched bird, nor are the tropical nocturnal noises so loud and various in any other place where I have been.

So far the country through which we passed was worthless for agricultural purposes; but early the next morning we came to an elevated limestone ridge, and beyond this outwork the banks grew sensibly higher, until they were some twelve feet above the present high water. With the higher banks appeared the iguanas; and I made my first shot,—a large female,— which was picked up, while three others fell into the water and sank before we could reach them. It was some time before I learned to distinguish these reptiles; for they are nearly of the color of the branches on which they bask, and until they move, are to the unpractised eye only a part of the bewildering foliage. I did not like to be told where to look, so before the day was half gone I could see an iguana as soon as a native.



Female Iguanas.

A mouth like a toad's, green, glittering eyes, a large pendulous dewlap, a row of lancet-shaped spines down the back, slender claws, and a long, pointed tail, certainly are not features to make the iguana an attractive pet; and yet it is gentle, easily tamed, and there are people who enjoy its company. Let not the Northern ladies shudder as they look on this picture; for do they not know, are there not among their number those who fondle and kiss(!) even the deformed pugs and lap-dogs? Unlike the worthless curs, the iguana is a most excellent food-animal; its delicate white meat is not unlike chicken, and the eggs—of which the female lays five or six dozen—are all yolk, and very delicious.[6] Being good swimmers, they drop from their perches over the river when alarmed, and after a fall sometimes of sixty to eighty feet the splash is suggestive of broken ribs, or at least a total loss of wind; but they scramble nimbly up the banks under the overhanging shrubs, and are lost in the forest. Like the

chameleon, they change color, and from green of various hues become greenish gray when taken from the trees. We had much less difficulty than Columbus and his companions experienced in adding these “serpentes” to our cosmopolitan bill of fare.

In the afternoon a boom across the river showed the neighborhood of mahogany-cutters, and a short row above this brought us to the head of navigation for our large boat, and we made fast to a tree on the right bank, where there was no clearing nor any easy way to land, although we could see that the banks were some ten feet above the water, and steep. Leaving the “Progreso” in the cook’s charge, we continued up stream in the little *cayuco* until we broke a paddle and had to return,—not, however, until we had made two landings.

Once up the steep and slippery bank, we found the land level, and in the dense forest there was no undergrowth. It always seems odd to a stranger in the tropics,—this entire absence of sod; but so dense is the upper foliage that there is no chance for small plants below, except such as can, like the sarsaparilla, climb up into the light above, or orchids, like the vanilla, which cling to, if they do not draw a part of their sustenance from, the tree-stems. The cohune palm (*Attalea cohune*, Martius.) was abundant, and by its presence confirmed the testimony of the dark chocolate soil to the exceeding fertility of the land. This palm seems to have three names applied to as many stages of growth. When young and stemless, it is *manàca*; in middle age, when the bases of the old leaves still cling to the trunk, it is *cohune*; and when age removes these scales, the smooth stem is *corozo*. I have never seen the manàca in flower or fruit, but I believe the three

are but one species. Other palms were intermingled with these,—some in blossom, some in fruit,—but none so common nor so large, both in stem and leaf. Later on we shall see a picture of the cohune and its very valuable fruit.

In one place along the bank I measured fourteen feet of soil of the best quality; nor was this surprising, since the valley through which the Rio Chocon flows is a catch-basin for the detritus of the limestone ranges of the Sarstun and Santa Cruz mountains, and its form guards against torrential floods which might wash away the rich deposit. When the summer rains flood the banks, as we found later, the water subsides in a few hours, owing to the wide-open lower course of the river.



Barbecue at Benito.

A gigantic ceiba-tree (*Eriodendron*) stood not far from the river, and two of its great buttresses enclosed a semicircle thirty feet in diameter, while the projections themselves were not half a foot thick. Trees of very various kinds throw out these supports. I have even seen a goyava (*Psidium*), which usually has a rather slender trunk, expand most astonishingly into these buttresses when growing in a

rich loose soil. It will, not unnaturally, occur to the reader that this must greatly increase the difficulty of felling such trees in clearing land. The difficulty is met by the woodmen in this way. A platform—called, strangely enough, a “barbecue”—is built of slim poles, often to a height of fifteen feet; and balanced on these frail supports, the cutter swings his long-handled axe. Of course he leaves a stump as high as his barbecue; but the ants (*comajen*) soon reduce this to dust. I have since then watched the cutters, and have wondered how they so speedily fell (they call it “fall”) a hard-wood tree, with no better vantage than two poles for their bare feet to cling to.

All through the forest there was a close, damp feeling, and in some places there was little light. We saw sarsaparilla, india-rubber, vanilla, and cacao growing wild, and every step brought some new thing to view; but it was less oppressive on the river, where there was sky above us of the true blue,—so much better to our tastes than the green canopy that met our eyes as we looked up on land. While on the river, we saw some curious long-legged spiders, seemingly plastered against the white limestone; and they were very unwilling to move their legs, which were two inches long. The vejucos from the over-hanging branches were very interesting, as these long, slender rootlets, if rootlets they be, hung sometimes a hundred feet, ending close to the water, but not touching it except in flood-time, nor do they, like subterranean roots, have branches or fibrous ends, although sometimes they seem to be unravelled into separate strands, like a cord whose form they imitate and whose use they usurp. We often pulled them and shook the branches from which they spring, without detaching them. The water was now clear and cool, and everything was enticing us to

loiter; but the day was closing, and *comida* awaiting us on the “Progreso.”

The moon that night was full; and with no mosquitoes in the air, we hardly cared to creep under our *toldo*. The light filtered through the palm-leaves and sparkled on the black river as it glided around the bend. We could see but a few rods either up or down stream, and we almost wondered how we came there, and should we ever get away. Far in the distance the howls of the monkeys and the cries of the night-birds broke the stillness around us; but we slept unconscious of the shower that poured on our toldo before morning.

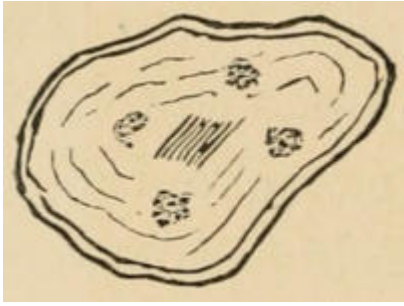
A very bright, warm morning in the middle of October is not unpleasant in the temperate zone; but here it seemed almost too warm to be seasonable, although the thermometer persisted in indicating 83°. Five of us were in our little cayuco at early dawn on our way down stream. The cayuco was not especially crank, but it was loaded to the water’s edge with five solid men; and as my hands grasped the gunwales, my fingers dipped in water on both sides. It was impossible for me to restrain the attempt to balance, which of course kept the cayuco in a constant quiver, alike unpleasant to myself and my companions. Add to this the consciousness that alligators were ready for us if we did upset, and it will be supposed that the voyage was not altogether agreeable.

We landed at last, and had a hard scramble up the steep, muddy bank, as many of the palms were armed with spines like needles (*Acrocomia sp.*), and there was little else to catch by. I was on the watch for snakes, and had my machete in my hand; but the first living denizen of the forest that met me was a

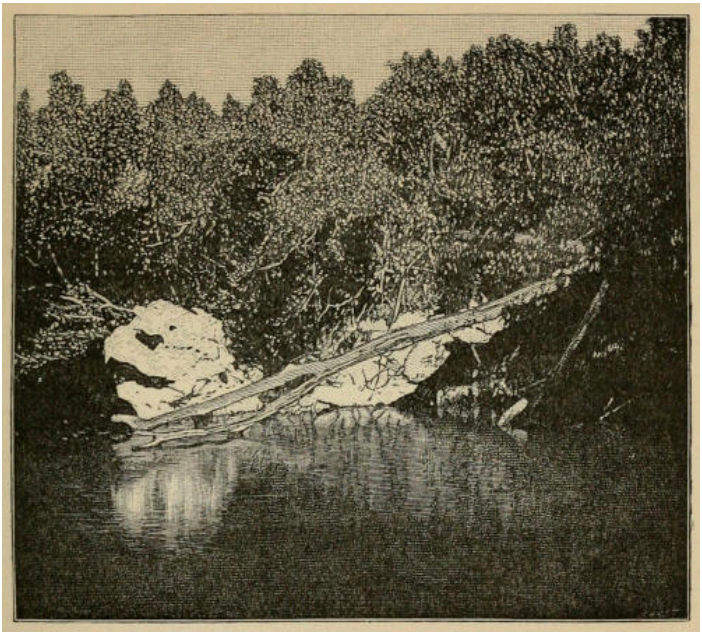
fine blue butterfly (*Morpho*), nearly eight inches across. I could not, and Guillermo would not, catch it, because he said it was *mala por los ojos* (bad for the eyes). It was a "sight for sair e'en." I found this curious superstition about butterflies common all through the country, and I confess that following their brilliantly colored wings in their rapid flight, under a blazing sun, does give one's eyes a very tired feeling that may explain the origin of the popular belief. I will not compel any one to follow me through the forest, nor up the steep limestone ridges where the corroded rock was worn into fantastic forms and partly covered with begonias, lycopodiums, and other plants. We found several circular valleys among those ridges drained by sink-holes, and often I heard water running beneath my feet. In some places were little wells, like the *cenotes* of Yucatan, containing fish, which pass from one to another by underground aqueducts. Again and again I mistook for serpents the huge, green, scaly creepers that flattened themselves against the trees or swung from the branches. Sluggish and insignificant centipedes were not uncommon on the trees; but nothing except tracks of wild hogs, peccaries, jaguars, and tapirs indicated that the forest was the resort of troublesome animals. The entire absence of any fallen or decaying trees or dead branches was a marked feature of this forest. The insects had eaten all this unpleasant matter; and in one place we saw a cavity as large as a barrel, where the ants had eaten a palm-stump, leaving only the fibrous roots to keep the earth in place about the large hole.

Towards noon the air, loaded with moisture and unmoved by any wind in the forest, became almost unbearable, and we were parched with thirst. Santiago came to our aid; and selecting a rough-

looking vine, of which we could not see the leaves, cut from it a length of some three feet, and from this trickled a tumblerful of clear, cool, tasteless water. This *vejuco de agua* was as large as a man's wrist, of tender substance and very porous. The mozos declared that if the vejuco was cut only once, the juice would all run up from the pendent end; so it was necessary to cut at once above, and block its retreat. On the palm-trees were often found clusters of nuts of various sizes, some with such hard shells that even the parrots must have been baffled. We cracked several kinds, and found them more woody and less oily than the coconut. Several mahogany-trees came in our way, and they impressed me more than the sequoias of California or the banians and baobabs of India. Rising with a straight and uniform stem far above the surrounding trees, they then spread their dense foliage like a massive oak above the tree-top plane. Rosewood, palo de mulatto, sapodilla, ironwood, and many other kinds were recognized, and our exploration ended for the day with a bath on board the boat, in which we dashed the cool river water over each other. The air was 86°, while the water was 78°. Our men who had been sent up stream to build a *champa*, or native house, returned to us at sundown in true monkey style, swinging down on to the boat from the branches of the tree overhanging the "Progreso." The absence of mosquitoes puzzled us, as it had the night before.



Section of Vejuco de Agua.



Dragon Rock, Chocon.

After the rain ceased, the next morning about seven, we paddled up stream in the cayuco. I have never seen rocks so curiously corroded; in some places they were like fossil bones of mammoth size, then like battered capitals and fluted columns, always of rather smooth surface, sometimes quite

perforated. In the hollows were ferns, selaginellas, and sometimes curious spiders; one rock was just like some monster crawling into the river. On the right bank several small springs trickled in, and on the other side a swift-flowing creek added materially to the volume of the river. Still we were getting into shallower water, and after passing in one way and another fifteen rapids or *corrientes*, we came to a huge tree that completely blocked our way. With a satisfied feeling, we declined to drag our heavy cayuco over, but beached her on a sand-spit, and waited for the return through the forest of part of our men whom we had sent to explore inland. Wild figs of good size came tumbling into the stream from the trees above; but they were not to our taste, although Guillermo said they were eaten when ripe. While we waited, a large canoe came down from the mahogany region miles above, and the three Caribs in it dragged it over the log with great labor. Besides their petácas, they had mahogany mortars for rice-hulling, and mahogany platters. In the forest their work is task-work, and they often have half the day to themselves; in this leisure time they carve the rejected butts into various useful articles, which they sell at the *Boca*, or mouth of the river. As we returned, we saw another use to which the ever-present machete is put; it is in turn knife, axe, adze, hammer, spoon, back-scratcher, shovel, pump-handle, door-bolt, blind-fastener,—and now a fishing-rod! Guillermo actually split the head of a large fish that was in the shadow of a rock,—a fish weighing some five pounds!

In the afternoon we inspected the champa our men had been building. The building process was certainly a novel one. On receiving our orders, the Caribs held a brief consultation, chattering in their

very unattractive language; while we knew no more of their talk than we knew of the intelligent ants, who are equally black, and hold their consultations unbeknown to us. The result was, however, that they separated and disappeared in the forest. Soon we heard the blows of the machetes; and then they came straggling back, two with the *aucones* or main posts of the house, others with side-posts, rafters, coils of vejucos, and bundles of manàca-leaves. In an incredibly short time the frame was tied together. The thatching with the palm-leaves took longer, as it was necessary to split each of the immense leaves, which were quite thirty feet long. These were tied on to the rafters closely, like clapboards, and formed an excellent roof, only surpassed by that made of another palm, called *confra*, found nearer the sea, which is so durable as to last eight or ten years. Butts of the manàca formed the sides of the champa; and then we had a house large enough for twenty men, with the labor of five men a day and a half, at a cost of $3.75. For our purpose it was better than the Palace of the Cæsars.

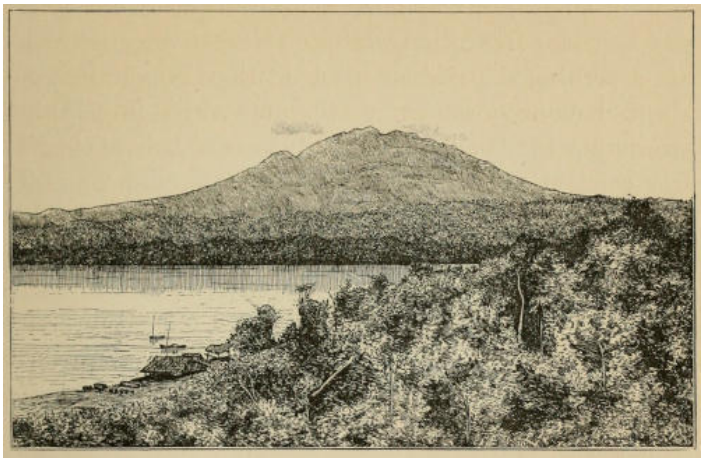
One morning I explored the tree to which we were moored. A fine balloon-vine (*Cardiospermum*) hung in festoons of fragrant flowers from the branches; among them was a humming-bird's nest fashioned as daintily as usual of the golden down of tree-ferns, and shingled with bits of lichens. It was not the season for eggs; but I have at other times found many nests, with never more than two white eggs of the size of a small bean. The young birds, I may add, are, when first hatched, most amusing little things, all heads and eyes, and without the long bill of maturer days. I found also a green grasshopper (*Tropideres*), five inches long, and very handsome of his kind. I wondered if he ate sugar-cane, and other

things one might want to grow if living in the champa.

One day, going ashore to cut some sticks for an awning on the canoa, I hacked with my machete at a tall, slim tree very common along the banks, and which had often bothered me by its curled, dried leaves, clinging to the tree and looking very much like the doves (*qualm*) which were so often on the tree that it is named for them. This tree, which is botanically known as a cecropia, one of the nettle family, had a hollow trunk divided transversely by thin partitions, and from this cavity came a swarm of ants. I had here a chance to verify the interesting description given by Mr. Belt[7] of the habits of these remarkable creatures. As he says, they get into the tree by boring a small hole, and then eat their way through the many floors of this vegetable tower; they do not, however, eat the tree directly for sustenance, but import with great care numbers of coccidæ, or scale-insects, to feed on the tree-juices and elaborate a honey-like matter, which the ants eagerly suck from a pore on the back of these little cows. I tried in vain to find the queen ant; but while every cecropia that I touched was tenanted by ants, never a single female came to light. There are several small outer doors, for the disturbed stem is dotted with the pugnacious little ants in a very short time. What first taught the ants to farm these dull, inert coccidæ? Other vegetables are ant-inhabited, but none that I know of afford such spacious accommodations.

Pleasant as this life on the river and in the forest was, the time came when we must return; and it was startling how many things we saw on our way down which we had passed unnoticed coming up,—tall reeds with feathery blossoms more graceful than the

pampas-grass; palms with bluish green foliage; flowers of the arum family more beautiful than a calla; blue herons; butterflies of the most attractive colors; fish like glass, that is as transparent, and about a foot long. Frank shot a beautiful grossbeak with scarlet breast and metallic green back, and brought me a fine purple passion-flower; another of the party shot an alligator, who turned over, exposing his yellow belly as he died. Altogether, the voyage down was more agreeable than the hard run up. Trees that were bare a few days before were now covered with white feathery flowers, and others presented masses of greenish flowers on their flat tops. We sailed and floated down the Rio Dulce by moonlight, and at early dawn anchored at Livingston.

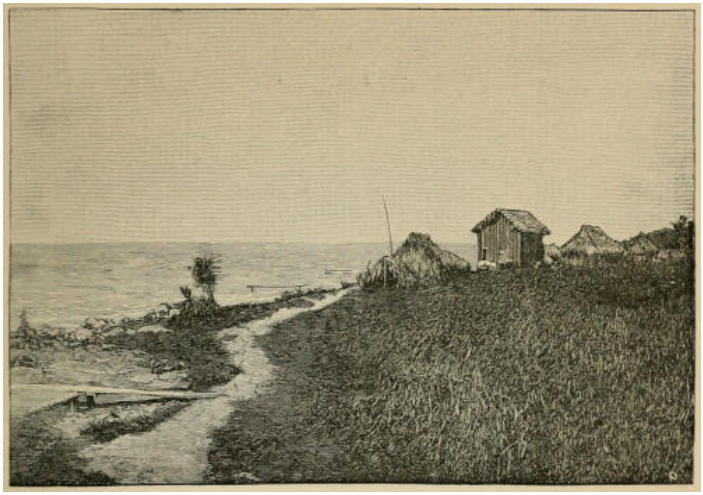


San Gil, from Author's House in Livingston.

Opposite the town are lands fertile and capable of producing fine crops to an enterprising owner. Frank and I rowed over several times, once exploring a neglected *finca*, where cane, sapotes, cassava, bananas, plantains, rose-apples, and coconuts were

all jumbled together; at another time visiting a cacao-plantation farther up the stream. There is certainly room for a wise investment of capital on these lands on the eastern slope of San Gil as far as Santo Tomas. And here let me write of this port, Puerto Barrios, and the Northern Railroad, although I did not visit them until the spring of 1885.

Santo Tomas is beautifully situated; but since the sad failure of the Belgian colony established there by a legislative decree of April, 1843, it has borne a bad reputation, and its inhabitants diminished to the insignificant number of a hundred and twenty-nine by the last census. Its harbor, into which no large river empties, is an exceedingly good one, and a wharf might be constructed on deep water; but the authorities, in selecting a terminus for the projected railway which is to connect Guatemala City with the Atlantic coast, and so unite the Atlantic and Pacific oceans, chose a place some three miles eastward from Santo Tomas, where they must construct a wharf some three hundred feet in length to reach twenty feet of water, and where often ships cannot lie, but must run for Santo Tomas in bad weather. Add to this that the site of the fine city of Puerto Barrios is a swamp at present uninhabitable, although laid out (on paper) in a very attractive way, with castle, theatre, hippodrome, and all the elements of a Centro-American city of the first rank. The splendid mango-trees, with their dark, dense foliage, are abundant in the old village, while here even the palms are dwarfed.



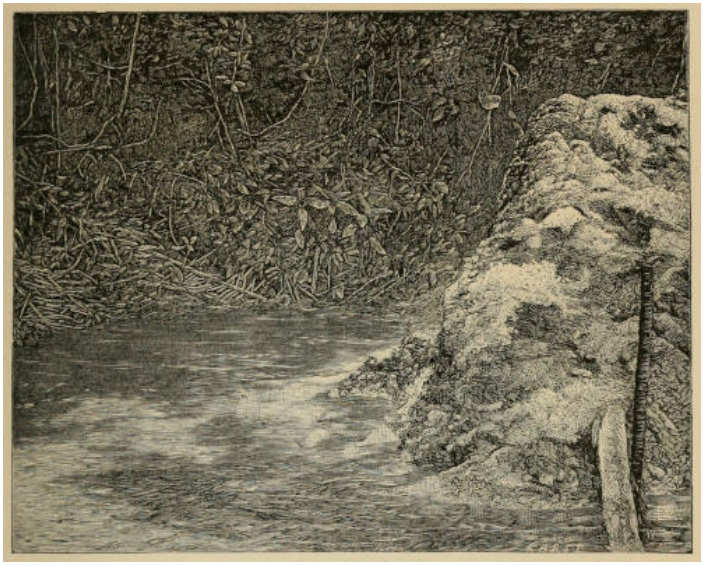
Puerto Barrios.

Arriving at Puerto Barrios late in the afternoon, we were kindly received by the contractors, and after an exceedingly good supper allotted comfortable beds in the large storehouse. We had heard of the cruelty practised towards the workmen on the railroad, and wished to know the truth. I of course understood the circumstances under which men were induced to go there to work, and knew that agents in New Orleans and elsewhere might and did make unauthorized promises to the shiftless adventurers who sought to better their fortunes in a new land. Men from the North cannot do hard manual work in this climate unless they are very careful in regard to diet, clothing, and general sanitary conditions. If they get wet, and sleep in their wet clothes, they will have a malarial fever in a newly cleared country. If they eat improper food, or proper food at improper times, their bowels will certainly protest. Now, I was convinced that the contractors did not take these precautions with their men, that in consequence of

this negligence a large amount of sickness resulted, and that complaints printed in the newspapers of the United States from the sick men were justified. I have seen the men who left the railroad and took service on plantations, and have talked with them, although I have never mentioned the subject to the several contractors and overseers I met; my opinion is therefore formed from what these unfortunate men told me.

In the morning we were provided with the only hand-car the road owns, and began our explorations. I will not mention the builders of that car, for it was a worthless article, and had it belonged to me I should have run it off the track and down a steep place into the sea. The road, of thirty-six inch gauge, was graded (in March, 1885) some six miles, and rails were laid four miles; but the thirty-ton locomotive, which had to do the work one of half the size could do, could run only over three miles, the track was so uneven. Men were cutting sleepers in the adjoining forest, and we saw many of mahogany. The grade is also being pushed from Tenedores, on the Motagua River, to meet this end. No great engineering is here visible, and the main difficulty seems to have been in getting suitable foundations for the bridges over the numerous small creeks. Along the track we saw two large snakes of the boa family which had been killed by the workmen. Some five miles from Puerto Barrios we came to the hot sulphur-spring. It is a pool, fifteen feet in diameter, close by the track, and pours out a considerable volume of clear, hot water, pleasant to drink when cooled, but while in the pool too hot to put one's finger in. Bubbles, probably of hydrosulphuric acid, escaped freely; but vegetation extended to the very borders of the pool, and all around the forest was

dense. A cool brook ran near at hand and gave a fine bathing-place as the hot water mingled with it. We were assured that the men who drank the sulphurous hot water never had fever.



Sulphur Spring.

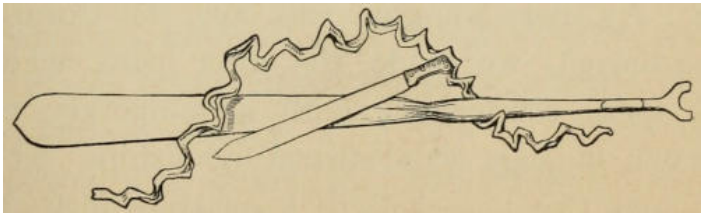
From Tenedores the surveyed line of railroad extends up the valley of the Motagua to Gualan, thence up the ascent to the high plateau on which stands Chiquimula, and thence to Guatemala City, where it will connect with the road now in operation from that city to San José, on the Pacific, five thousand feet below.

Before leaving the Atlantic coast we must again mention the numerous steamship lines from Livingston to New Orleans, New York, Belize, Puerto Cortez, Jamaica, and England. Communication may thus be had with the best markets for all tropical products. The lowlands are amply able to supply New Orleans, New York, and Boston with bananas,

plantains, pine-apples, and coconuts, the latter growing most abundantly at Cabo de Tres Puntas on Manabique. The climate is healthful and not too hot, averaging for the year about 80°; and as there is no marked change of season, a perpetual June seems to exist. Capital alone is wanted to develop this Atlantic coast into the great fruit-producing orchard of the United States. Sugar-cane grows rapidly; and so strong is the soil that rattoon crops have been cut for twenty years without replanting, and no diminution of the saccharine yield has been noticed. Sugar can certainly be raised much cheaper here than in Cuba or in the Hawaiian Islands.[8] One day carries the crop to Belize, four days to New Orleans, and eight to Boston or New York. Yet, notwithstanding all these advantages, the Northern farmer wears out his life in the consumptive fields of New England, where his crops grow only four months of the year, instead of settling here, where he can plant any day of the year (except saints' days, unless he employ coolies), and reap a rich harvest in due season. He sometimes goes to Florida, which is neither tropical nor temperate, which is nothing but a raised coral reef with a veneering of soil, and where frosts cut off his crops every few years. We often hear of the extreme unhealthfulness of the tropics; but is it generally known that more persons die of consumption in Massachusetts than of the most dreaded tropical diseases in Central America? The last time an official census was taken, Livingston had a population of a thousand, in round numbers, and the deaths of the year numbered seven,—one a centenarian, and two youths who fell from coconut-trees and broke their necks; while in Boston the rate for July, 1885, was 28.1 per thousand.

The objection to being among a strange people and

under a foreign government and strange laws may best be met by following me through the country, where my object was to answer these very objections for myself; and if my readers will patiently follow me, I will tell what I saw, and they may form their own opinions.



Paddle and Machete.

CHAPTER III.
ACROSS THE CONTINENT, WESTWARD TO COBAN.

The last days of October, 1883, promised good weather for the hill-country, and Frank and I again left Livingston in the only way one can leave it,—by water. Our route was as before,—up the Rio Dulce; but this time we had no comfortable but heavy "Progreso." We had, however, a better craft for our voyage,—a fine native canoa, cut from a single log of a wood they called cedar (which it is not); its length was thirty feet, and its beam five and a half. With two masts and triangular sails, this canoa could show good speed with a fair wind; but we cared little for her sailing qualities on the present voyage. As there were no ribs, and the thwarts were easily removed, we made the after part, which was floored, quite comfortable with a temporary roof, or *toldo*; our luggage was stowed amidships, while our captain and two men had their quarters forward when not rowing or paddling. We had our coffee-pot (as necessary a travelling companion in Central America as an umbrella in England) and a supply of food for a week; although we hoped our voyage might last less than five days.

The cliffs on the Rio Dulce were as beautiful as ever. Theirs is a beauty which never fades with the fading year; and yet the changes are very marked. I never saw such a river,—a very Proteus, it presented a new form every time I saw it; and Frank, who is far

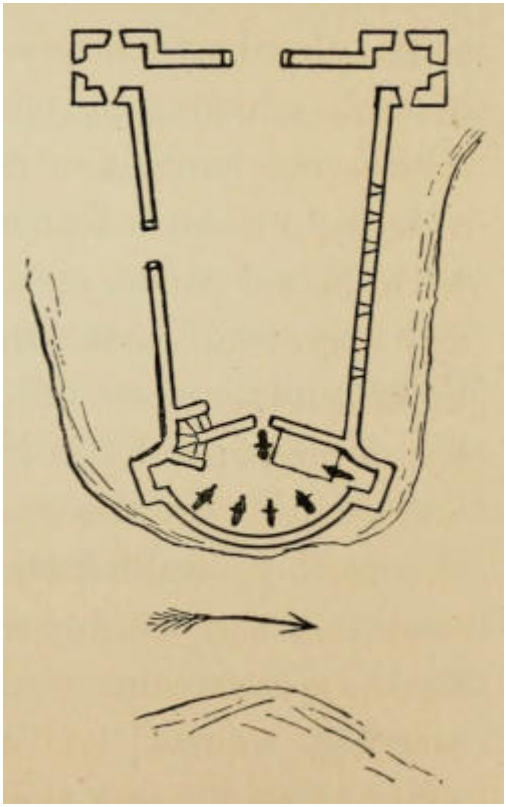
more familiar with its face, tells me I have never seen it in its glory, which comes in July, when the brilliant orchids are all aglow. Now a cereus with crimson blossoms was prominent; so were the bromeliads, parasites on almost every tree. But among roses I saw the thorn. Our Caribs discovered a huge serpent asleep on a white cliff far above us. Frank, with a laudable blindness to all that was not pleasant, could see nothing but a fallen tree. I saw only a few feet of the head end, which had a diameter of about six inches; and I obstinately refused to fire at the reptile, since he was quite as near as it was desirable to have him, and should my bullet wound but not kill him, it was quite possible that he might wriggle down into the river below. Porpoises were common far up into the Golfete, where they were pursuing the abundant freshwater fish. A light sea-breeze helping us, we anchored for the night far above Cayo Paloma. Our *mozo*, Santiago, slept on one of the thwarts, which he exactly fitted, being slightly less in stature than the average New Englander.

Our anchor was up betimes; and before six o'clock in the morning we came to San Felipe,—a place we both had great curiosity to see; for in the absence of any definite account of the old Spanish fort, we allowed our imagination to build a very imposing, picturesque, and, withal, strong castle.

We found that Spanish castles in Guatemala were almost as unsubstantial as *châteaux en Espagne*; and it was some time before we distinguished the Castillo de San Felipe through the morning mist. At the outlet of the Lago de Izabal the shores approach each other closely,—indeed, the channel is hardly a stone's cast broad; and on the northern point stands

the fort built in 1655 to protect the then important commerce of Izabal from the buccaneers.[9] It is well built of round (uncut) stone, and the waves of the lago dash against the walls, which are gradually yielding to the insinuating roots of many plants,—even a delicate blue commelyna joining in the attack that the seventeenth-century pirates began in vain. The van of this vegetable scaling-party was led by a fine papaya (*Carica papaya*), which now towered far above the walls with its head of ornamental leaves, but which perished soon after; and we saw only the bare stem on our return, three months later.

Passing this mediæval ruin, we came to a slight wharf of stakes, where we had to undergo a rigid inspection by the *guarda*, who insisted on opening our trunks, in spite of a slight shower that was wetting us. But we submitted with better grace on reflecting how little amusement of any sort the custom-house men could have in this sleepy looking place; and when the nonsense was over we sent Santiago with the coffee-pot, which he was told to have boiled over somebody's fire. He was also told to get all the food he could find; and this useless wretch brought back, as the total result of his foraging, three eggs! Coconut-trees and goyavas were abundant, but no fruit could be found. After this very frugal breakfast,—in which we did not ask Santiago to join,—we walked to the little Comandancia; but the officials were not visible, and we entered the old fort, as the only other sight in the dirty little town.



Castillo de San Felipe.

The plan is rather peculiar, but doubtless well suited to the defensive warfare of those days. The doorless entrance-ports invited us to enter, and we found a courtyard of paved and level surface occupying almost the entire area. At the outer end, commanding the channel, the bastion was higher than the main portion, approached by narrow and winding steps, easily defended; and here was the most curious part of the whole edifice,—the gun-deck. There is a law in the Guatemaltecan code forbidding photographing in military works; but I

have since wished that I had broken that law then and there, so that my readers might see for themselves the clumsy guns, the carriages with wooden wheels, the magazine roofed, indeed, but doorless,—the whole business as dangerous to the gunners as to any enemy outside. Some fine orange-trees were growing up through the pavement, and their hard green fruit would be suitable ammunition for the ancient guns.

There was nothing whatever to attract the most curious traveller in San Felipe, and we sailed and paddled on with frequent calms and showers. We were completely in the hands of our boatmen, whose knowledge of the lago proved to be very limited; but as ours was even less, we suffered them to coast the northern shore, when, as we afterwards learned, the law directed our course southward to Izabal, the port of entry, where we should have obtained a permit to proceed on our voyage inland. Our map indicated the course we selected as the shorter to the mouth of the Rio Polochic; but the map was, as usual, wrong.

There was not much to see, as the mist and rain hid the mountains and hung low on the shores, driving us frequently under our rubber roof. Whenever the mist lifted we caught glimpses of the far southern shore, with the grand wall of the Sierra de las Minas catching the fleecy clouds on every black pinnacle; and the clearing sky attracted us still closer to the northern shore, where we could see a low wooded country backed by a high range of mountains, with here and there an opening through which some stream reached the lake. At two o'clock we landed at Sauce, on a beach of black sand, evidently volcanic, scattered with fragments of chalcedony and agatized wood,—a formation which

puzzled me exceedingly, as all this region is supposed to be non-volcanic. We had no time to follow the beach to ascertain the extent of black sand, but it reached far beyond the few comfortable huts on the shore,—as far, indeed, as we could go into the jungle inland. In it grew luxuriantly limes, bananas, mangoes, and other cultivated plants not recognized. Goyavas grew to a large size, but all the fruit was ruined by worms.



Making Tortillas.

Here first we saw the whole process of tortilla-making. The *maiz* was hulled in lime-water, washed

in the lake, and ground laboriously on a stone *metatle* into a consistent paste, which is then skilfully patted into cakes from four to six inches in diameter, round and thick as an ordinary griddle-cake. These are then baked on an iron plate or *comal*, but not browned, and should be eaten hot, and then the tortilla tastes like parched corn. The metatles in Guatemala were all of very simple pattern and unornamented, not so well wrought as those in Mexico and farther southward, but serving their purpose equally well. A woman who cannot make good tortillas is in Guatemala not deemed fit to assume the duties of housekeeping; and yet there are few articles of food requiring more labor in preparation than this unleavened bread. Except the Hawaiian *poi* (paste of the *Colocasium esculentum* or *Kalo*), I can recall no article of diet that demands more physical labor. The inhabitants of the tropics in both these cases lay aside their proverbial indolence and earn their bread by the sweat of their brows. For our men we procured meat in long strips put on skewers and crisped over the fire, while for ourselves we bought bananas, limes, and tortillas. After this we continued our voyage until dark, when we anchored near shore and enjoyed a very quiet night. At early dawn we were again under way. The showers continued, and far away on the Santa Cruz range the rains were heavy, boding ill for our ascent of the river. The lake water, usually quite potable, was now full of a small green alga, and the cast skins of ephemera were so thick on the surface that for miles we could with difficulty get a dipper of clear water.

Twice our Caribs thought they had found the mouth of the Polochic; and at last, at high noon, we discovered it, where we least expected, on a marshy promontory or delta. Masses of coarse floating grass

were attached to the banks on each side, almost blocking the way; and the rapid current, which we estimated at five miles an hour, made these grass plots wave as if the breezes were playing over their tops. Pelicans were abundant and tame; so were the iguanas. The air was still, and the thermometer marked eighty-five degrees, while the water was much cooler,—nine degrees. All the creeks in the lowland flowed from the river, so high was the flood, and we found no comfortable landing-place.

At night we anchored in the stream, and the mosquitoes were very troublesome; unlike those on the Chocon, these were black, and had very long and sharp lancets. At three in the morning we could bear them no longer; Orion was in the zenith, and we struck our toldo, the men slowly rowing on until six, when we anchored for coffee. As we were eating, a cayuco, covered with a neat awning of leaves, came rapidly by us on the way down; its occupants assured us that there were many *vueltas* (bends) and a great current (*mucho corriente*) before we should be able to reach Pansos.

Ten miles a day was the utmost limit of our propelling power, and in crossing the bends to escape the current we hardly held our own, so strong were the flood-waters. Our creeping pace gave us ample time to see, but no time to stop for, the many curious things on either bank. Close on the shore were red abutilons, and over them crept the long-tubed white convolvulus (*Ipomœa bona-nox*) and the brilliant yellow allamanda; high up on the wild fig-trees were black, long-tailed monkeys, common and tame, their wonderfully human faces peering down at the intruders, the mothers clasping their hairy little babies to their breasts with one arm, and with

the other scratching their heads in a puzzled manner. One of our Caribs shot a little fellow before I could prevent him, and the creature clung, even in death, by his tail. As I had shot an iguana through the head with my revolver in the morning, I was called upon to cut with my bullet the provoking tail, that the Caribs might have a *caribal* feast. Regard for my reputation as a marksman, and the memory of a taste of roast monkey in India, forbade the attempt, and the poor monkey, like the Tyburn thief, “is hanging there still.” There was foam on the water, but we heard no water-fall,—and indeed the flat nature of the country made falls, cascades, or even rapids, impossible.

We passed another night when the torrents of rain had no effect on the myriads of mosquitoes and black-flies. Still all the brooks ran inland, although, as we afterwards learned, in the dry season these banks are so high above the water that they are hard to climb. All day long we saw monkeys along the banks, though high above us, and the following night we heard the howlers; but in compensation for that evil had no mosquitoes. By Saturday (Nov. 3, 1883) we hoped to be well on our road from Pansos to Coban, but, except the cayuco, we saw no signs of men or the work of men’s hands; on that morning, however, we came to a little *finca* on the river bank, where a good sized stream from the river flowed into the yard and through the house. The poultry had taken refuge on the roof, and the Indian proprietors waded through the flood. Luckily the oven, or fire-place, was raised on sticks several feet above the water, so that the señora could make us some tortillas,—eight for a real. Eggs were the same price. Slight as the forage was, it was very acceptable, as our food was nearly gone, and we were already

dependent on the Caribs for their cassava-bread. The river, these persons said, was falling, so we pushed on with new courage.

A fine spider-lily (*Crinum*) grew on the bank where we moored our canoa. We noticed that whenever we made fast to the cane-brake, the black-flies bothered us far more than when we had trees overhead; was it not because the cane did not afford roosts or concealment for the fly-catching birds and reptiles? The blossoms of the cane were very beautiful, indeed as attractive as those we had noticed on the Chocon. Mahogany-trees were seen here and there, and we were told that there was much of this fine wood on the Rio Zarco, just at hand. I also saw a goyava-tree, some eighteen inches in diameter and eighty feet high. In the afternoon we passed willows (*Sauce*), and about five o'clock were startled by an unusual noise behind us, when a huge three-storied structure came sweeping up the stream, as if in pursuit; it was the steamer "City of Belize," a flat-bottomed stern-wheeler. As the current was very strong and the channel narrow, we hastened to make fast to a large fig-tree overhanging the stream. Before, however, our arrangements were made, the steamer was upon us, and her surge, added to the current, tore us from our mooring and swept us under the tree. Our masts caught in a branch, and we were turned on our beam-ends. For an instant our situation was critical. Our weather-rail was six inches under water, and we were clinging to the other side as the water came pouring in; then the mainmast slipped, and we righted, all hands bailing out eagerly, while Frank held by some branches and prevented a repetition of the disaster. If the canoa had upset, our journey would probably have ended there, as our photographic supplies would have been ruined, and

there would have been little chance for us in that deep, rapid river, with no banks, and no trees that offered food, even if they gave us shelter from the alligators; and these too would have shown themselves as soon as the disturbance caused by the steamer had abated. Our Carib captain was as frightened as we were, and with the little English he knew, exclaimed as we anchored for the night: “D—d good boat; wouldn’t sell her for h—ll!” The persons on the “City of Belize” must have seen us filling, but they did not stop to see if we drowned.

All night we had mosquitoes, but no rain; and to our wakeful excitement was added the horrible noises of tigres, wild hogs, monkeys, alligators, and other animals. We were getting tired of the river, and our voyage seemed interminable. Early in the morning we passed the mouth of the Rio Cahabon, where the steamer had anchored the night before, and soon after I shot my first alligator. He was a large one, and my ball struck him just behind the foreleg. He jumped clear of the water, turned over, and fell back, tingeing the river with blood.

We thought we had counted twice the seventy-two vueltas in the fifty miles between the mouth of the river and Pansos; but this port still fled before us, and it was nearly dark before I smelt human habitations. Not one of our company had ever been there before; but the Caribs were greatly amused at my assertion, and I think Frank smiled in his sleeve at my scent. But I certainly smelt them, and kept the men rowing, and blew the conch-shell, as the law requires on approaching a port; and at last, long after dark, the lights of the steamer fast at the wharf appeared, and we were soon alongside.

We had been a week in our canoa, and five days

without landing; but our troubles were not yet ended. The stupid soldiers flatly refused to allow us to land our traps without a permit from the comandante, and insisted that we should go with them to the Comandancia, nearly a quarter of a mile away. I started with Santiago, over a road worked into pasty mud by the ox-carts from Coban. It was raining and very dark, and the almost naked soldiers tried to light the way with splinters of fat-pine, called here *ocote*. At last the road ended in a black pool, into which the barelegged soldiers waded. But I declined to go farther unless they carried me; and it almost made the night bright to see the look these apologies for men gave each other and the stranger who weighed twenty pounds more than their united weights. It ended as it should have begun; and Santiago went on with one guard to explain matters, while with the other I returned to the steamer. The officers of the steamer had kindly invited us to sleep on board; but the soldier on guard refused to let us pass the plank, so I pitched him into the river,—the proper place for all such stupid military men,—and went on board unopposed. Soon word came that we might sleep where we pleased. Mosquitoes were as bad here as anywhere on the Polochic; and while Frank slept on the dining-table without a net, I had a very dirty bed and a net full of mosquitoes and other things; so in the morning we could not decide which had had the least comfort.

With light usually comes a more cheerful feeling; and a good breakfast, to which the officers of the steamer invited us, made us feel at peace with all men, and I even took the trouble to ask if the soldier I had pitched into the river was drowned. The rain having ceased, we started for the town, ferrying ourselves over the creek in an old canoa half full of

water.

As the comandante had not recovered from his overnight debauch, we went about the little village to do some necessary shopping and arrange for our journey to Coban. The town was small, but neat and attractive. A clear brook ran over a limestone bed, and in one place it fell over a ledge into a pool where washing is done both of persons and garments. An old Spaniard was bathing here, and, although half a dozen women were washing clothes or soaking maiz in the same limited bath-tub, he invited us to join him. Near by, a man was dressing an oxhide by pegging it to the ground and then salting the inside.

At the Comandancia we found, not the chief, who was still too drunk, but two very polite officials, with whom I had a pleasant chat; I then wrote my name, residence, and all the titles I could ever lay claim to, as well as those of Señor Don Francisco, my "Secretario." The impression was so marked that our lawless neglect of Izabal was overlooked, and we were given a full permit to land our luggage. Once more we returned to the river, in order to dismiss our Carib boatmen, and on the way we met an intelligent ladino who spoke English (indeed he had been to London); and he, acting as our interpreter, greatly assisted us in shopping and in our preparations for the long journey before us. In his garden were some goyava-trees (*Psidium*); but the fruit was unripe, and we found that our new friends eat the goyava as the Chinese eat pears and other fruits,—quite hard; salting it, however. Santiago found horses for Frank and myself, and at the Comandancia we procured Indian mozos to carry our luggage. This was our first experience of a system that we found very convenient throughout the

country. By an order from the Comandancia, Indios are obliged to carry burdens, as in the present case, precisely as their Northern brothers have to serve on a jury, and do it for three reals (37½ cents) a day,—quite equal here to the fee the law allows an intelligent juryman in the North. They cannot be sent beyond their district, nor made to carry more than four *arrobas* (100 lbs.). In many cases they carry six arrobas without complaint, supporting their burden by a raw-hide strap (called *mecapal*) over the forehead. The person hiring pays to the authorities, with whom the men are registered, a real a head. I provided four of these men to carry our luggage to La Tinta; but Santiago cut down the number by half at the end of the first stage. Our experience with these *mozos de cargo* was pleasant, as they usually kept up with our horses on the mountain-roads, and took good care of the parcels intrusted to them. Each one carries a palm-leaf umbrella (*suyacal*), which also serves for bed at night. I have employed dozens of these bearers, and found only one of whom I could complain; and he was not with me on the road, but sent with our mozo Santiago,—which might be an excuse for him.

There is no *posada* in Pansos; and after getting our breakfast at noon in a little shop which was papered with pictures from “Harper’s Weekly” and “Puck,” we decided to spend the night at Teleman. After some difficulty in getting permission for our guide to leave town,—the comandante being still drunk,[10]—at two o’clock, mounted tolerably, Frank and I, with our boy Roberto, left Pansos. The pleasure of being again on horseback after the dull inaction of our canoa voyage was so great that I was willing to overlook any deficiencies in my mount. As Roberto stopped a short distance from the town to make a

slight addition to his wardrobe, we went on alone for a while; the road could hardly be missed, it is so worn by the bullock-carts used to bring coffee from the plantations of Alta Verapaz. The beautiful vegetation, healthy and luxuriant, drew our attention from the muddy road, which became worse as we got farther into the forest. Many fine clear brooks crossed our path, and as we came out of the woods the valley of the Boca-nueva lay before us. Two piers of masonry stand on opposite banks of this river; but the iron bridge lies on the shore at Livingston, and there seems to be no very strong attraction between the iron and the masonry. The absence of a bridge was no great hardship, for not only was the river shallow and easily fordable, but there was a most curious vine-bridge, built of vejucos, perhaps a hundred and fifty feet long, hung from two convenient trees and approached by ladders. It was old, and one side was broken down; so it required care and courage to cross it. It was very similar in construction to modern wire suspension-bridges, but wholly vegetable, there being not a particle of metal about it.

A few miles farther brought us out of the wooded to the cleared land, where is the hamlet of Teleman, famed for its delicious oranges. Although nearly sundown, and cloudy, the thermometer stood at seventy-eight degrees. We found lodging at the house of Don Pablo, a fine-looking old man with a heavy gray beard. His little home was in the midst of orange and coffee trees close on the road, and only a light rail kept the too familiar cattle out of the house. We had no long time to look around before dark; but our comida was good, and the coffee grown there was very fine. The hospitable Don Pablo pointed to a pile of oranges on the floor and told us to help

ourselves, which we did freely. Another Spaniard came in soon after we were settled, and I had the best chance I had ever had to exercise my "book Spanish." I surprised Frank, and myself as well, obtaining from these two agreeable men a great deal of information about our road and the country generally. The room was certainly as strange a one as I had ever slept in,—a table in one corner, with a mahogany bench fifteen inches wide before it (on this bench a small child slept all night, without pillow or covering); two hammocks; a bedstead with mosquito-netting; piles of coffee, oranges, and other small matters; a shrine of tinsel containing two images, before whose dingy holiness a sardine-box lamp burned luridly; meat in strips hung from the roof. The chickens had all gone under the bed for the night; and when it was time for the featherless bipeds to roost also, our host and his women retired into the dark inner room, after assigning me the bed and Frank one of the hammocks, while the stranger took the other and soon settled himself comfortably. The bed certainly was not luxurious, and the pillow had seen better days; but I rigged up a cleaner head-rest with a towel, and was comfortable enough. Not so Frank, who was unused to hammocks; and before I was quite asleep I heard his whisper, asking if there was room to take him in; and as the bed was large, his hammock was deserted.

We were up at four; and as it was still quite dark, the sardine-box lamp was again lighted, and we drank the delicious coffee grown in Don Pablo's garden, while a little *muchacha* drove out her chickens from under the bed. The clouds promised rain; but we had none all day, in spite of the predictions of both host and guide.

We crossed two *aguas calientes*. One of them was steaming in the cool morning air; but their temperature was very little above that of the atmosphere at midday. Cacao-trees were very common, though we saw none cultivated. Here we first saw in abundance some of the convolvulus blossoms for which the country is noted. One was of a pale rose, another a deep blue, with hispid calyx and a corolla five inches across, while a third was of flesh-color and satiny texture, covering the trees near La Tinta. We arrived in that village about noon, and after some delay found a house where they would cook us an almuerzo. Our *menu* comprised good white rolls, broiled meat, fried plantains, frijoles, fried eggs, and good coffee,—all which we relished exceedingly; and we were not less satisfied with the price,—two reals each. The house contained only one room, a stone cooking-bench[11] at one end, and a row of box-like beds along one side. Under these several hens were sitting, and two or three dogs tried hard to get into a bed, while a colt kept putting his head into a window, and finally upset the corn-box. There was not much to the town, certainly. The school had thirteen pupils,—some bright enough; but the church was an insignificant shed. Pasturage was good, and we noticed a very large proportion of bulls by the roadside; these were quite as gentle as the cows.

In the afternoon we crossed, on an iron truss-bridge covered with a thatched roof, the Polochic, now a shallow but still wide stream. I wished for my camera here,—as I had several times since I left Pansos; but we were effectually parted until our mozos should overtake us at Coban. We had been assured by the blind ladinos that there was no interesting scenery on the road. We were now

constantly ascending, and we passed many Indios of the Poconchi tribe,—clean, good-looking, and dressed in white, with fanciful designs of darker colors sewed on.

We arrived at Chamiquin early in the afternoon, and found the hamlet consisted, as far as we could see, of two very inferior houses and as many sheds. A fine grove of mango-trees, but no fruit; a hen-house built in the second story only, and accessible by ladder; palms, with the withered leaves still clinging to the stem (cultivated for the nuts, but dreary looking); limestone cropping out on the neighboring hills,—comprised the distinctive features of the place. Our room was new and clean, lined with banana-leaves, and the hard earth floor was of course uncarpeted. The furniture was simply a table and a bench; but frugal as the furnishing was, our dinner surpassed it,—a few tortillas, four eggs, and some nasty coffee for two hungry men! We had our own candles, or we might not have seen how little it was. Perhaps our hostess did as well as she could, for the twenty-five dogs that besieged our room while we ate were evidently half starved.

All through the country the dogs are very ill conditioned, and I several times remonstrated with their owners for what seemed to me cruel treatment; for although I detest this unclean brute, I do not like to see him suffer. But I was always assured that the dogs were underfed, not on account of cruelty, but to make them good hunters and scavengers. It certainly made them useless for the only purpose besides hunting that dogs seem to have been created for,—human food. Guatemala canines are certainly a contrast to the juicy little *poi* dogs of the Hawaiians (which are fed only on *poi*, sweet potato, and milk),

or the excellent dogs always hanging in the butcher-shops in China.

Here let me speak of the atrocious coffee that we found in this place and elsewhere as we went on. The berry, which is of fine quality, is burned, not roasted, and when pulverized, boiled for hours, and then bottled. This nasty mess they call *esencia de café*, and mix it with boiling water at the table. It was generally served to us in patent-medicine bottles, with a corn-cob or a roll of paper for a stopper. It had not the slightest taste of coffee, but reminded one of the smell of a newly-printed newspaper.

We were on our way next morning at half-past five, and found the road much washed by the severe rains of the night before. On our right, across the valley, was a fine cascade spattering over the limestone rocks, and now we came for the first time to home-like pine-trees. Begonias of two species grew in the clefts of the roadside rocks, and in a house-yard was a fine *Euphorbia Poinsettii*. As my horse had hurt his foot at Teleman, I walked much of the way, so our progress up the hills was not very rapid; and we were by no means expecting it when a turn in the road between two hills brought us abruptly into San Miguel Tucurú.

This interesting town, of some three hundred inhabitants, had no posada; but we found a capital *casa de hospedaje*, kept by a señora of African descent married to an invisible ladino. The house was of fair size, built of adobe, and well plastered. A black Saint Benedict hung in effigy on the wall,—the forerunner of a host of black saints and holy people whom we saw both in sculpture and painting as we advanced through this ancient domain of the Spanish missionaries. Our señora had a *calentura*,—the

national excuse for not doing anything or going anywhere; but for all that she got us a good breakfast. Our horses were used up, and our boy could get no others. An appeal to the alcalde brought one poor horse; but all our further efforts were answered by *mañana* (to-morrow),—that word so hateful to an active man, but universal here. As we had a very comfortable house to pass the night in, we made ourselves easy, and started to explore the town. On our way in I had seen an attractive spring a short distance from the road, and I went alone to explore it, taking a calabash I had just purchased for a drinking-vessel. A well-worn path led across a meadow, and a sudden turn brought me upon a party of women in exceedingly slight apparel, bathing and washing in a little pool into which the spring emptied through a spout. These naiads were most of them young; but one old woman, a foul-visaged hag, scowled savagely upon me, while the others giggled as I quietly handed my calabash to the prettiest, and asked her to give me a drink of water, which she caught from the high spout with skill and without hesitation, although the action exhibited her form in all its beauty. How I wanted my camera!

Stuck in the muddy road was a train of ox-carts, and the oxen from seven or eight were yoked to the head cart; and when that was dragged out of the slough to a camping-place, the next and all the rest were treated the same way. We wandered about town between the showers, saw lime-kilns, a lead-mine, and several potteries, and at last came to the church,—a more considerable building than we had yet seen in Central America. The door was tied with a leather shoestring, and there was no resident priest. The images seemed, to our unaccustomed eyes, most horrible; but they must have appeared in

holier form to the poor worshippers, for marigolds and amaranths were strewed before them, and votive candles burned on the floor. The ancient name of this town was Tucurúb (meaning “town of owls”); but the Spaniards re-christened it by one of the saints called Michael,—which I do not know, but apparently not that one whose churches in western Europe are usually perched on some almost inaccessible pinnacle, as at Le Puy in France, St. Michael’s Mount in Cornwall, etc. Only one man in the town could speak English, and he could give us very little information about our road. Indeed, all the way we were in that delightful condition of travelling without knowing exactly what is coming, and constantly meeting the unexpected. The rain at last came down in earnest, and drove us within doors. A Boston boy who has a fine coffee estate in the neighborhood came in as we were at dinner and initiated us into the mystery of *tortillas tostadas*. Certainly by toasting, the tough, clammy, cold tortilla is made even better than new.

At four in the morning our boy Roberto lighted the candle and waked us up. We had settled our score the night before, and so did not disturb the family, but completed our toilet on the doorstep, as we saw to the saddling of our horses, by the light of the solitary candle. It was so dark as we rode away that we could not see the road, and blindly followed our guide’s white horse. A gate across the road gave us some trouble, as we could only feel it. By daylight the scenery must be fine; but as the noise of rushing waters, and a blacker streak by the road-side, alone indicated the torrents and *barrancas* at hand, we were troubled rather than pleased by these picturesque properties. We came to an ox-train camped in the middle of the road; and but for the

glowing embers of their camp-fires we should have had great difficulty in passing.

As the gray dawn brightened over the mountains, the numerous white cascades attracted enough attention to keep us from the drowsiness we were both falling into from the darkness, cold, and dampness, and the slow gait of our horses. Fire-flies were still sparkling when it was light enough to see the road.

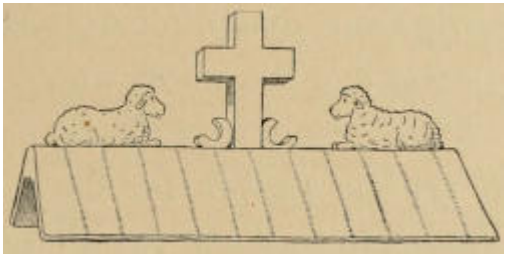
It was quite early when we came to Tamahù; and as we entered the little town (1,517 inhabitants), which is twelve leagues from Coban, we saw a shrine with images as horrible as any of the idols of the ancient Polynesians. Most of the houses had tiled roofs, and looked neat and comfortable. At one of the best we stopped for coffee; and while the preparations for our meal were going on, Frank and I went up to the church hard by. The door was tied with a rope, and we found little of interest within, except images closely resembling East Indian idols, and around all a flavor of mild decay. Our hostess—for always it was the señora who managed the hospitalities and took the pay therefor—gave us rolls and fried plantains with our good coffee, and the table and bench were of some choice wood, darker and harder than mahogany. Fine roses blossomed in the yard (it was November), and cotton-dyeing and weaving, the principal industries of the town, were carried on in nearly every house. Lime-burning and tile-making also employ a goodly number of the people.

As we rode into the country, we passed many clumps of a fine arborescent composite some twenty feet high,—one of the giants of this great and widely spread family. Crimson lobelias (like cardinal-

flowers) with red stems, crenulate leaves, and a very unpleasant odor, were common. The road was badly gullied, and the nightly rains had made the Polochic, which still kept at our side, an angry looking torrent quite unfordable. The grades of the road were good, and showed engineering skill and constant care; but for all this my horse broke down before noon, as I had expected, and our boy, after some consultation with the drivers of a mule-train we passed, captured a stray mule for me and turned the horse loose. All the horses here seem so feeble, and many of the mules so sore, that I seriously thought of capturing one of the powerful bulls feeding peaceably by the path, and riding him in true African style; but Frank earnestly dissuaded me, so we had to walk half the time to save our wretched hacks.

Through the mud we rode into Tactic, four leagues farther on, at half-past one o'clock. The barometer recorded 4,650 feet; but this was not high enough to insure dry roads at this season. The town, of some thirteen hundred inhabitants, seemed prosperous; the houses were of a better class than any we had yet seen, and the gardens were full of fruit-trees and vegetables. Tree-abutilons, both pink and crimson, were covered with blossoms, and peach-trees bore both blossoms and unripe fruit. The roads were quite too muddy for foot-travel, except in native undress. The corridors of the houses generally had carved posts and lintels, and the central tile of the ridge was usually fashioned into a cross, with two lambs or doves as supporters. The *casa municipal* was a noteworthy building. In gardens we saw fine coffee-trees, and were told that here there are three blossomings in May, and as many harvestings in December; the first and third are small, while the second is large. Roses were even finer than at

Tamahù; and a little girl gave me a bunch of a kind much like the old-fashioned cabbage-rose. Most of the inhabitants are Indios of the Poconchi tribe.



Roof Tile.

The façade of the church is ornamented with dumpy statues of saints, and the main altar is elaborately carved. We noticed a picture of three men in the flames of Sheol,—whether Hell or Purgatory we could not tell; one wore a tiara, another a mitre, while the third had on a plain four-cornered canonical cap. In front of the church we bought twenty *jocotes* (*Spondias sp.*) for a medio. There are several varieties of this plum-like fruit, and the red is larger and better than the yellow. When quite ripe, the rather tender skin contains a juicy yellow pulp around a rough stone. From the fermented juice *chicha* is made,—much used as a mild intoxicant, not unlike thin cider.

As we rode out of town we saw that the suburban gardens were much overrun by squash and bean vines. Maiz stood fifteen feet high; far up on the hills we saw cornfields (*milpas*), having in their midst dwelling-houses almost in the clouds, and seemingly built like swallows' nests against the steep hillside. The *campo santo*, or cemetery, was surrounded by adobe walls, and seemed utterly neglected. We had seen in the church, and now found by the roadside, a

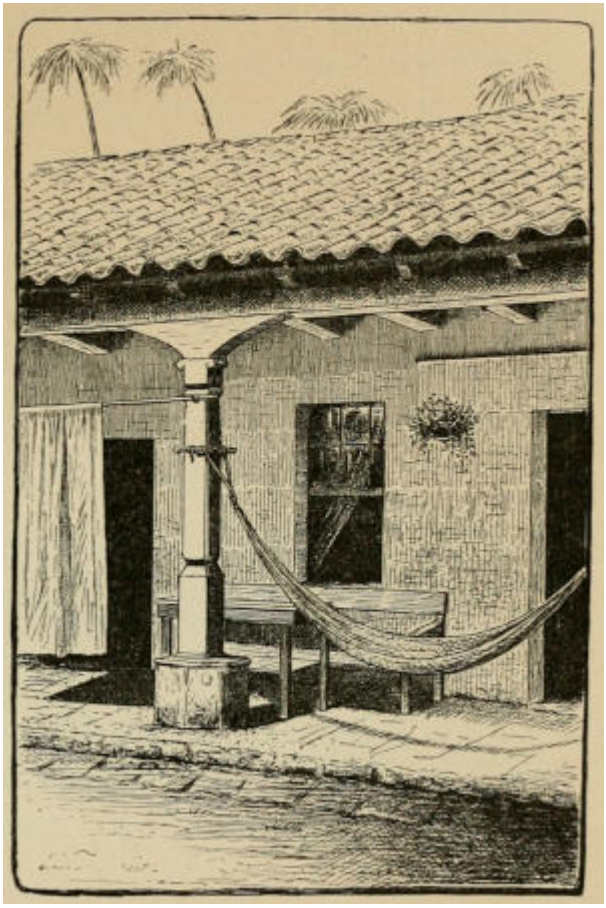
fine red and yellow orchid, and another pure white one, as well as the cardinal-flower. All day there had been showers; and when we arrived at Santa Cruz, long after dark, we were wet, in spite of our *ponchos* and the water would run into our boots.

There was no posada, so our boy declared, and we had to try the *cabildo* for the first time. The *Escuela por Niños*, or "school for ninnies," as Frank persisted in calling it, was placed at our disposal; but the floor was bare, hard concrete, and we had no mats, while there was no chance to hang our hammocks. It was not inviting; but one of the attendants kindly brought two mahogany settees from the court-room, and this was so hard a couch that one might be pardoned for going to bed with boots on,—and mine were so wet that I feared I should not get them on in the morning if they once came off. We needed food quite as much as a bed, and at last found rolls and coffee at a little shop near at hand. At four o'clock in the morning there was an earthquake, which did not wake Frank, though it jarred my bed as though some one had run against it in the dark. This shock was felt, as we afterwards found, at Coban, San Cristobal, and for miles around. Slight earthquakes are said to be common enough here, but we saw no evidence of severe ones.

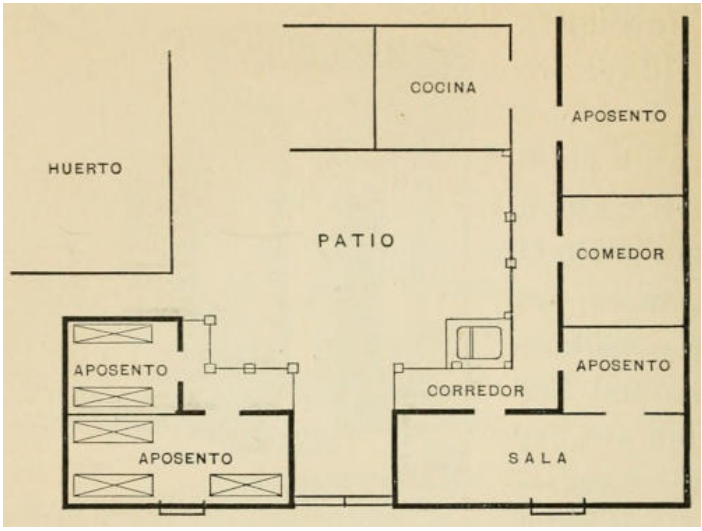
In the morning at half-past five, while Roberto was saddling the horses, we visited the church and found many curiously carved and gilded altar-pieces. After performing our ablutions in a puddle in the road, left by the last night's rain, we got our coffee and hastened on our way, as it was Friday, and we still had twelve miles to ride to Coban.

This city, although at an elevation of 4,500 feet, is surrounded by much higher hills; and from the pass

over which the road winds, the view of the surrounding coffee-region is very fine. The streams were in flood, and some of the lower plantations were under water. Near the town we saw the method of raising coffee-plants under frames covered with dried ferns. Crossing a good bridge, we came up a paved street, and soon after ten o'clock rode into the Hotel Aleman, where we had a very comfortable room and two beds with sheets and pillow-cases,—the first we had seen since we left Livingston; and we were not now compelled to sleep in our clothes. Our breakfast was the best we had found since we had been in the country, and consisted of soup, sausages, *frijoles negras*, wheaten rolls, fried plantains, *tortillas tostadas*, tomato salad, fried potatoes, and good coffee. The potatoes here are native, seldom larger than an English walnut, and very mealy. In the patio of the hotel bloomed roses and violets.



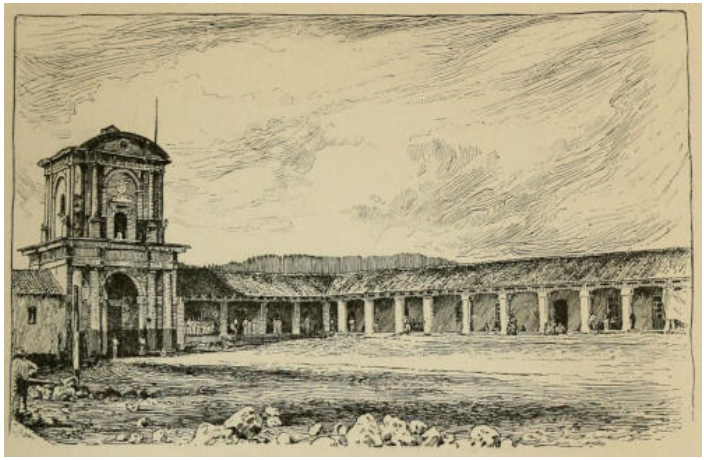
In Hotel Aleman.



Plan of the Hotel Aleman.

As this Hotel Aleman was the first house of solid masonry we had entered since our arrival in Guatemala, we examined it with some curiosity. Externally it was very plain,—white with stucco, of one story, and roofed with red tile. Windows were few, and the large door of two valves was generally closed in a rather inhospitable manner to an outsider. Once within the portal, however, the scene changed wonderfully. Before us was a courtyard (*patio*), into which the house opened. Directly in front was a plain building, used as kitchen (*cocina*) and stable; on the left was the garden (*huerto*); on the right, the corridor, on which opened the *sala*, or parlor, an apartment or two, and the dining-room (*comedor*). In the corner was a large concrete tank to catch rain-water. Our own apartment was at the left of the entrance, and was quite large, with tiled floor and separate corridor. A curtain was suspended between two of the pillars to shade the dining-room,

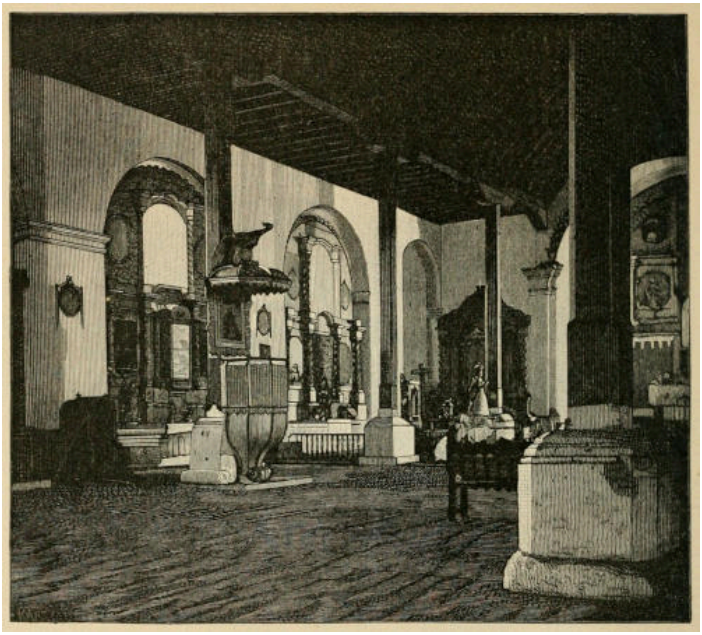
and hammocks could be swung in every direction when needed. Birds hung in cages, and flowers in baskets; and the *négligé* air of everything, except the neat little Indian women who did the household work, added to the comfortable feeling the place inspired.



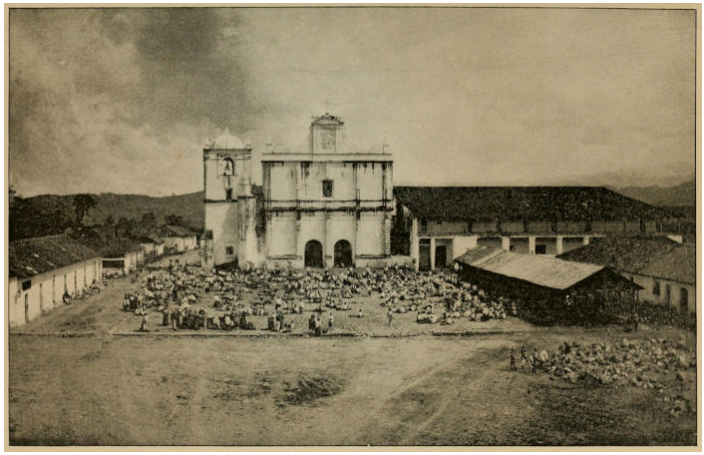
The Cabildo of Coban.

We walked up a paved street an eighth of a mile to the casa municipal, and, passing an arched gateway in the clock-tower, entered a spacious plaza, with the cabildo on our left and the foundations of the new palace on the brow of the hill opposite. Directly before us was the church and connected buildings,—once a college of priests, since confiscated by the Government, and now used as a music-school, blacksmith's shop, and for other purposes. The main part of the Plaza was paved; and here were congregated several hundred Indios, mostly of the Quekchi tribe, buying, selling, and bartering. We bought twenty-five fine granadillas (fruit of the passion-flower) for a medio, and as many jocotes for the same price. Delicate straw hats, woven in two

colors, were three reals and a medio; cotton napkins (*servilletas*) of native weaving, two reals; palm-leaf umbrellas (*suyacales*), such as every *mozo de cargo* carries, one real. There was a fair supply of raw cotton, cacao, brown sugar, tallow, soap, and blankets.

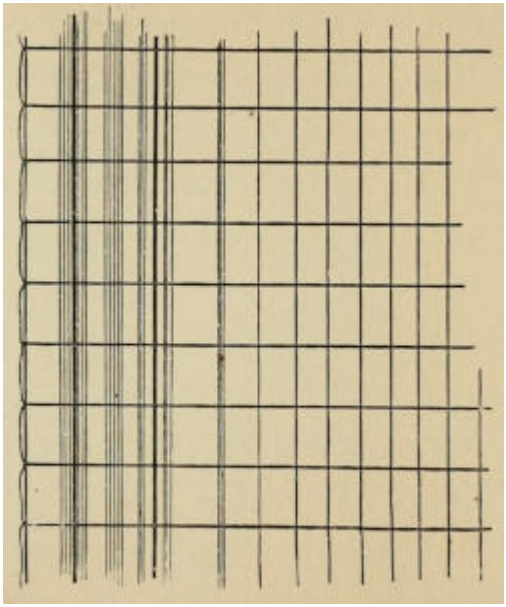


Interior of the Church at Coban.



COBAN CHURCH AND PLAZA.

The church was very large and interesting; but the front was disfigured by two distinct main entrances, and the bell-tower was too low for the church. Within, there was the simplest architecture imaginable,—plain timber posts, square, with a slight chamfer, with pillow-block capitals and stucco bases; an uneven tiled floor; and side altars of poor design, sometimes painted to imitate marble. On one of these altars a famished cur was eating candle-ends; on another were the three crucifixes of Calvary,—the repentant thief being a young man of personable form and features, while the other was a bald-headed, bearded villain; a very impressive object-lesson we afterwards saw in many churches. A fair St. Sebastian was the only picture of tolerable merit.



Pattern of Cloth.

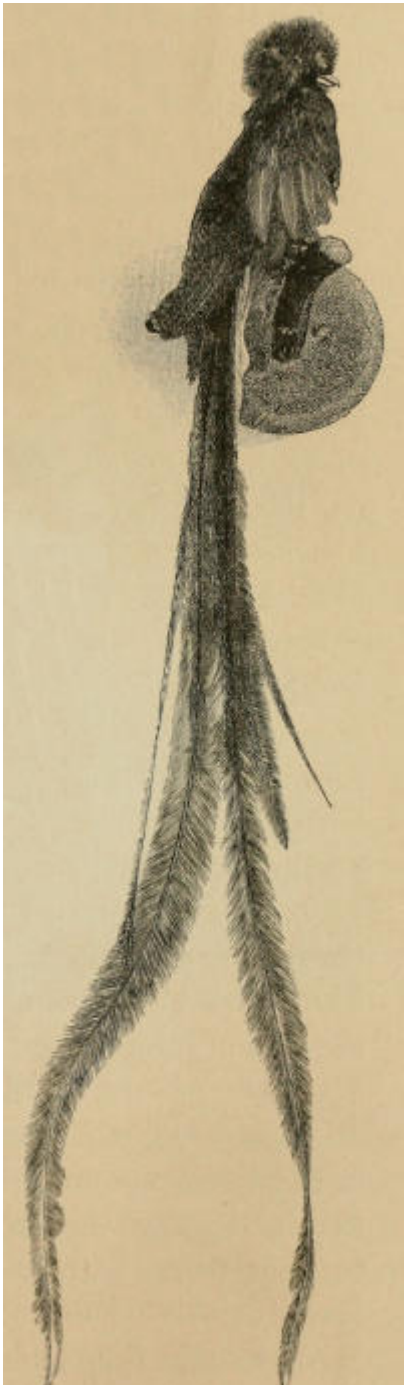
We called on the excellent Jefe politico, Don Luis Molina, who received us very politely, although our call must have been a great bore to him, as he spoke no English, and my Spanish was very lame. The Indian women in the streets all dress alike,—in a skirt of indigo-blue cotton, generally figured in the loom; and their long and abundant black hair is carefully bound in red bandages (*listones*) reaching nearly to the ground. Their stature is below medium; they seem modest and good-natured. The blue cloth is woven in rude looms, several of which we inspected, and the thread is dyed in vats of masonry in the house-yard. The threads are dressed in the loom and dried by a few coals in a potsherd placed beneath the warp. A border is woven at each edge, and also in the woof, at intervals, to mark the length of a dress-pattern. A common design is given on the

previous page,—the lines being light blue on dark. The lines of light filling are carried outside the selvage, and of course are easily broken; otherwise the cloth is coarse and strong, in widths of a *vara*, or thirty-three inches. The weavers were very obliging, and pleased to have us inspect their work.

The soil here is a rich red loam, and coffee grows better than elsewhere in the country. Coffee-trees, well-trimmed and loaded with crimson berries, were in every garden, and violets and strawberries were in blossom.

The domestic architecture was certainly not imposing, but it was substantial, and perfectly suited to the climate. Houses were generally but one story in height, built of masonry and covered with stucco, around a patio towards which the tiled roof inclined, covering a wide veranda as well as the house. The windows on the street projected slightly, and were protected by strong iron grills. Many of the streets were paved, and drains and culverts provided to remove the rain-water. As there is no aqueduct, water is brought from springs or caught from the roofs during the frequent rains. We were told it had rained incessantly for the last ten days, and the wet clouds still rested on the surrounding hills, giving a slightly gloomy aspect to the otherwise fine views in all directions. The meat-market was outside the Plaza, and a single glance was enough; but the general market was so attractive that, after a quiet night's rest (we were of course far more wearied by sight-seeing than by any day's travel), we turned our steps thither in the early morning. In our search for mules we came to the blacksmith in the cloisters. He was an American (*del Norte*); and it was said that when he was drunk he could shoe a mule better than

others could in their soberest moments. He had been drinking when we found him; but he gave us some information, took us to his den hard by, where his family consisted of a native wife and a black monkey, and gave Frank the skin of a quetzal (*Pharomacrus mocino*). This skin was so beautiful that it put us on the search, and we found a señora who had a moderately large collection of these and other bird-skins, which are brought in by the Indios from the mountains of Alta Verapaz.





Quetzal.

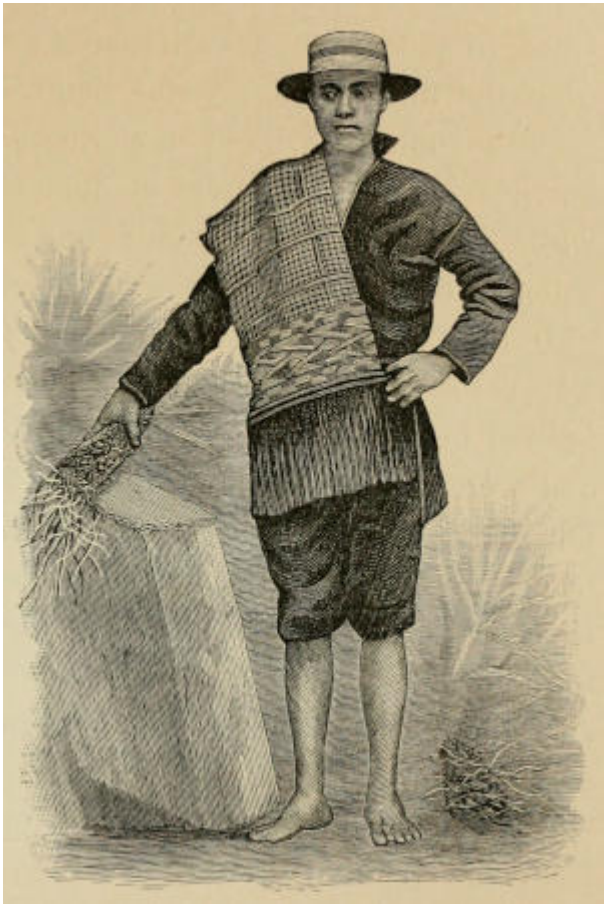
The quetzal (pronounced *kezàl*) is the national emblem, and is decidedly a bird of freedom, as it never survives captivity, even when taken in earliest life. In ancient days none but the royal family could wear the beautiful plumes. At present the Indios bring the skins from the mountains in considerable numbers, their value depending on the length of the tail-plumes, which sometimes exceeds three feet. As the female is very plain, without the beautiful tail of the male, she escapes the hunters, and consequently preserves the species. The wing-coverts and tail-feathers of the male are of a superb peacock-green, changing to indigo, the inner breast scarlet, and the wings very dark.

We went to the campo santo, on a hill westward of the town, which is reached by a flight of a hundred and sixty concrete steps; the whole was built at the cost of one pious man. Several shrines on the way up made convenient resting-places for those who used those steps,—like the Golden Stairs at Rome for knee-worship and penance. In one of these shrines was a lamp of native make, in form of a bird with many necks. The chapel on the top was small, and the doorway so low that I struck my head violently in coming from the dark interior.

Except the noble pine-trees on the top, there was nothing attractive in this last resting-place. Some grave-diggers were making merry over a small and shallow grave they had just finished, and we gladly turned from the *calvario* to the fine views townward.

At night the regimental band gave us some agreeable music (perhaps national airs, certainly unfamiliar tunes); and as the music died away in the distant streets we fell asleep, to be awakened at day-break by the drums and fifes calling the men of military age to the regular Sunday inspection. We were present at the roll-call in the Plaza; and of all absurd military sights, this was the chief! Soldiers in every costume and of all sizes stood in line, much as they arrived at the rendezvous, and solemnly answered to their names. Would that I could present a photograph of this “Falstaff’s Regiment” to my readers!

After coffee Frank and I went to church. The Indian women were all kneeling on the tiled floor, and formed the bulk of the worshippers. A few men stood or knelt, with striped blankets thrown gracefully over their shoulders. Mahogany benches between the side altars gave us an opportunity to sit comfortably and study the interesting scene before us while we listened to the very fine orchestra (consisting mostly of Germans), which occupied benches in the midst of the nave. Far away in the loft, over the door, a bass drum and fife, and still farther out of doors rockets and explosions, accompanied or emphasized the music. The sacrament of the communion was being administered to worshippers,—apparently in both kinds; the wine in a sort of sop, while the wafer was carried by an attendant. All through the long service the women remained devoutly kneeling on the tiled floor.



Indio of Coban.

After church the market was more active than usual, and we spent the time before almuerzo in lounging through it. In the afternoon we were made happy by the arrival of Santiago and our mozos, with our luggage in perfect order; and not long after the Jefe Don Luis called, and assured us that we should have all the mozos we needed to carry our luggage onward. We had decided to take the unusual road to Quiché, about which even the Jefe could give us

little information, and we found no one else who knew more; so we decided to send our heavier luggage direct by Salamà to Guatemala City, while we took with us only one mozo to carry those things we needed by the way.

In the evening we turned again to the church to hear the vesper service. The spacious edifice was dimly lighted by the candles on the altars and pillars, and men and women knelt all over the rough floor. A choir of female voices was singing as we entered, and soon the officiating priest was conducted by candle-bearing acolytes to the altar. The responses by the choir and orchestra (organ, violin, flute, and violoncello) were very impressive, the musicians often joining their voices to the music of their instruments. The Indian drum, made of hides rudely stretched over the hollow trunk of a tree, boomed from the remote part of the church, and bombs and rockets exploded outside in a most effective manner. A black-robed young priest entered a confessional near where I was sitting, and a veiled female at once knelt at the side, while others in the immediate neighborhood moved quietly out of earshot. The whole service was very solemn; and the clouds of incense from the swinging censers of the Indian boys partly concealed the tinsel and tarnished gilding of the uncouth altar, and even cast a glamour over the huge doll, which, most gaudily dressed, represented the Queen of Heaven. The decaying church, so painfully out of repair by daylight, was covered with respectability, even with sanctity, by the shadows of night. One cannot but feel with sadness that the offices of a religion held so sacred here in centuries gone by should be so lightly regarded, and that the church buildings reared by so much labor and often unselfish devotion should now be cared so little for,

even in this State of Verapaz, where the Church gained an ascendency over the Indios which the iron-clad and iron-hearted Conquistadores had never done.

Monday was spent in photographing views in the neighborhood and hunting for mules. Of these we agreed to take three for our use all through the country at a charge of $150; but when we unsaddled them at our hotel we found they all had sore backs, and accordingly sent them home. In the evening I went with the postmaster (a Kentuckian) to an examination at the Colegio de Libertad. Three ladino lads did most of the reciting in arithmetic, botany, zoology, and history; and a certain doctor took the *rôle* of chief examiner,—evidently quite as much bent on displaying his own knowledge as that of his pupils. I had to ask a few questions, which were understood and promptly answered.

In the morning we visited the Government storehouse for *aguardiente*. The inspector wanted us to taste the fire-water, which was so strong that it seemed to blister the tongue. The sale of this liquor is a Government monopoly, yielding a very considerable revenue.[12] A distiller at this place has a license, for which he pays four hundred dollars per month; and he must furnish a minimum of sixty-five bottles *per diem*, paying twenty-five cents a bottle for all over this amount. All the product is brought to the public store, where it is tested at 50°; and the retailers send in their written orders for the number of bottles they require. The *estancas* (or drink-shops) pay forty dollars per month. The unfortunates who drink take a small tumblerful at a time.

I bought a mare—*yegua colorada*—for sixty dollars; and as all bills of sale and receipts must be in

Spanish, we, with the help of the postmaster, composed the following simple affair on stamped paper:—

COBAN, 13 de Novr. de 1883.

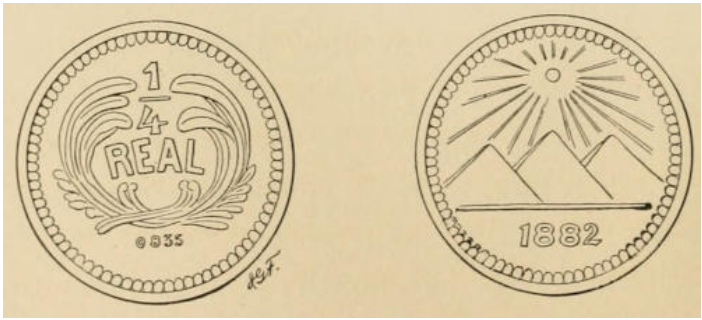
Saben:



Que yo Miguel Reyes vicino de Coban, Alta Verapaz, he vendido y vendo a Don Guillermo T. Brigham una yegua colorada con el hierro del margen en la suma de sesenta pesas en efectivo. En constancia firmo yo el vendidor.



The paper is not only stamped, but also water-marked, and is for sale at the principal shops. As the stamps are changed every two years, the Government has to redeem all stamped paper on hand at the end of each biennial period.

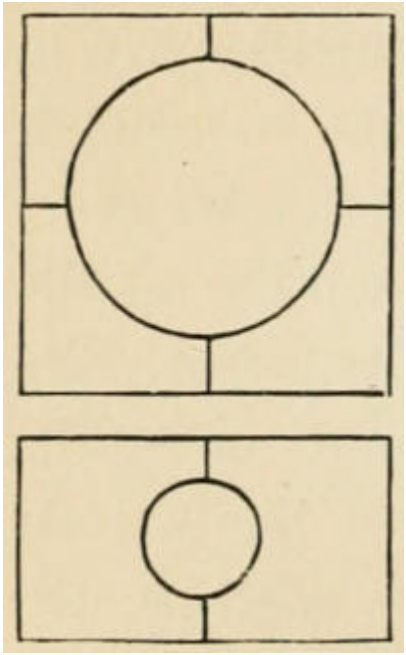


Cuartillo of Guatemala (enlarged three times).

CHAPTER IV.
FROM COBAN TO QUEZALTENANGO.

By Wednesday we had captured two mules; and these, in addition to our mare,—all being well shod,—enabled us to leave Coban accompanied by a capital mozo de cargo, who carried my photographic outfit. Santiago rode one mule, I the other; and Frank had the mare, who was a little wild at first, but soon became very tame and attached to us by kind treatment. After trying to get away for three days, we started early in the morning, and nearly forgot to look at the barometer, which was my constant companion; but after we were in the saddle the little dial was consulted, and the needle indicated an elevation of forty-four hundred feet. No barometer was needed to mark the elevation of our spirits on getting on the road again. As far as Santa Cruz we retraced our steps. Our mozo kept up with us, carrying our photographic and cooking utensils easily. And now this little town, in the early morning, was far more attractive than when, wet and hungry, we came to it before. On this visit there was more to eat, and from a tree by the wayside we bought twenty-five oranges for three cents, and also some good bananas. Our breakfast was very satisfactory, although eaten in a dirty house full of filthy children. At two we started on a good road for San Cristobal, where we arrived in an hour and a half. This little town, of some four thousand inhabitants, is surrounded by hills of great beauty; but the Laguna is an insignificant body of water. As

there is no posada, we rode into the Plaza, and had a capital room assigned us in what was once a monastery,—now confiscated to public uses. Our comida was obtained at the house of an aged señora to whom the polite comandante conducted us. We found that Thursday and Sunday were the principal market-days, that the town-clock chimed the quarters, that there were unworked mines of silver and lead close at hand, and that the maguey grew abundantly there. We also watched the process by which the rotted leaves are macerated and washed in the brook which flows through the town, and we saw the resulting *pita* spun into cords for hammock-weaving.



The priests' kitchen was roofless; but the great cooking-range was intact, being built of brick, with perhaps a dozen pot-holes of graduated sizes,—the

largest being cut from the corners of four tiles, the smaller ones from the edges of two. Besides this range, which occupied the middle of the kitchen, there were two large cooking-benches.

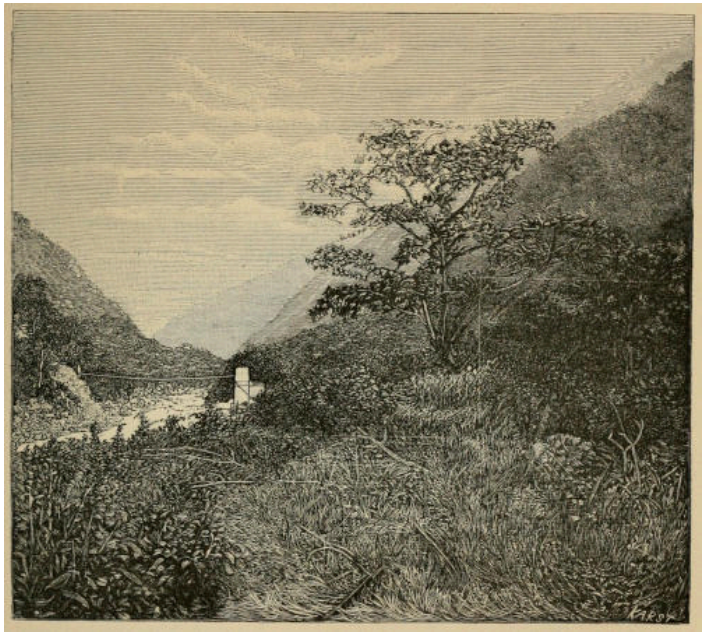
The road to our next stopping-place was remarkably good, and the scenery very fine,—the road winding along the side of a mountain and overlooking deep valleys in which the night-clouds still lingered. By the wayside we saw a cascade of calcareous water, which petrified twigs and leaves in its reach. By eleven o'clock we rode into a sugar-plantation belonging to President Barrios, now in the charge of an old schoolmate of his, Juan Prado. There both sugar and coffee were cultivated, and much fine imported stock kept. It was but one of the many fincas belonging to the President, where he has endeavored to improve the agricultural standard of his country and the native stock as well. The cane was of the ribbon variety, and of fair quality; but the mill was simply a vertical twenty-inch iron roll-mill turned by four oxen. There was but one open kettle, with no clarifier; and the inspissated syrup was run into wooden moulds and cooled into very dark hemispherical blocks (*panela*),—a form of sugar much in demand among the Indios.

Señor Prado received us most hospitably, and set before us bananas, anonas, and limas, or sweet lemons; then brought us large glasses of a warm liquid made from rice and sugar,—not at all to our taste, although a favorite drink of the mozos. The buildings at the President's finca were neither pleasant nor convenient; but a large roof, substantially framed, was being walled in with hewn pine-planks three inches thick, each plank representing an entire tree. In this building men were

grating off the juicy pulp of the coffee-berry in rude machines; after this pulping the berries are washed, and spread in the sun to dry.

We here learned that we could not cross the Chixoy (pronounced *chisoy*) River that afternoon, as the wire suspension-bridge had been swept away the last year, and the man whose duty it was to haul travellers across on ropes would not be there so late in the day; we were consequently obliged to yield to the importunities of our host and stay over night at Primavera. To entertain us, in the afternoon Señor Prado took us to a mound which the new roadway had just grazed; and together we dug out fragments of fine pottery and bits of human bones much decayed,—the lower third of a left femur and a fragment of a pelvis being the most distinctly human. Some earthen vessels had been found here and sent to the Museo Nacional in Guatemala City. The bones were mingled with charcoal and ochre, and often cemented together like lime concretions or fulgurites.

We each had a tumbler of warm milk as a “stirrup-cup” when we said our *adios* to our kind host in the morning, and soon after six we were on the road again. Here, as so often again in the republic, we found that the road-bed was undergoing active repair. The primitive method of removing large rocks and ledges greatly interested us. Fires are kept up on and around these obstructions; when thoroughly heated, these are left to cool, or the cooling is hastened by water. In either case the hammerers have easy work.



Rope Bridge over the Chixoy.

The narrower road led among pine-forests, where many of the trees had been girdled and were slowly decaying,—the *comajen* being unknown at this elevation. Men were cutting timber for the President's house and for a new bridge. A mortise is cut in the end of each log, to which the drag-ropes are fastened. We passed a pleasant village in the valley below us on our left, and after about nine miles of poor road we came to a rapid descent of twenty-two hundred feet, so steep that we were obliged to lead our mules almost to the bank of the Chixoy, where the pier on the side nearest us had been undermined in the last flood. The path ended on a narrow rock shelf, where was fastened a rude timber frame, from which two small and well-worn ropes stretched nearly two hundred feet to the

remaining pier on the farther bank. A hundred feet below was the Chixoy, foaming over its rocky bed. This we might see to the best advantage; for one by one we sat in a sling hung from a rickety traveller, and, launching from the cliff, slid rapidly down the slack ropes, and after sliding back at the middle, were hauled up on to the remaining pier. From this structure we descended a rough ladder to the shore, which was sandy and strewed with bowlders and other remains of the action of higher waters. Dizzy as our own passage was, it was safe enough compared to the crossing of our animals. By the help of Indios, we stretched a rope across, and finally swam all our mules safely. Santiago and the bridge-keeper swam splendidly in the rapid current, and the latter was a fine muscular, lean specimen of manhood. Frank and I swam in as far as we dared, and landed the soaked and frightened animals. The bath was cool, and for the first time we had no thought of alligators. While I photographed the bridge, Frank went to the hamlet of Jocote to get eggs and tortillas, and Santiago boiled our coffee. Beautiful butterflies were hovering over the rounded pumice-stones strewed along the banks; and on a rock were fine Achimenes, the Dorstenia (which resembles botanically a fig turned inside out), and a wild Martynia.



FRANK AND HIS MARE MABEL.

Starting again in the early afternoon, we found the way led up and down through the valley, until we were seven hundred feet above the river, which in one place quite disappeared beneath the limestone ledges, to reappear some distance beyond. On either side the steep slopes were covered with coarse grass; and there were many small, compact aloes, with broad leaves and dried flower-stems here and there. Among the rocks were maguey-plants and a few palms,—these last seemed quite out of place in this high, dry country. Under the pine-trees the sod was green, and in the small lateral valleys clear brooks improved the pasturage; and here at the head of each larger gulch we found the deserted camps of the mozos de cargo.



TWO VIEWS AT CHICAMAN.

After many turns we came at six o'clock to the village of Chicaman, just as the rain began to fall. This hamlet is on the north side of broken hills, and overlooks the Chixoy valley,—here of great depth, but narrow and winding. We found a picturesque little house, where we slung our hammocks in the best room, eating our *huevos* and tortillas on a shrine sacred to the black "Lord of Esquipulas." This shrine is usual in houses far from any church; and here it was embowered in leaves, flowers, and fruit,—among the latter citrons of a large size and the showy yellow fruit of a solanum. We were nearly four thousand feet above the sea, and the night was cool,—a comfortable ending to a day altogether too short to hold properly all the fine weather, beautiful and changing scenery, and delightful journeying crowded into its twelve bright hours.

Before the sun had melted the clouds in the valley below us, we were on our horses and slowly climbing a steep ascent of eight hundred feet. I had photographed the house, and, turning the camera on

its pivot, obtained a view of the cloudy valley below: these views are before the reader now. A league brought us to another Santa Cruz,—a village pleasantly situated, and about the size of Chicaman, consisting of perhaps ten houses. There we saw by the roadside some fine oranges; but when Frank rode up to the house with his "¡Buenos dias, señora! ¿Tiene usted naranjas?" he was met by "No háy" (there are none). That phrase we heard altogether too frequently on our journey. In this case it simply meant that the señora had no oranges in the house; but she added that we might for a medio pick as many as we wanted! We tried the several trees, and filled a pillow-case with the fine fruit,—half a bushel for five cents!

We had little need of guides, for the *camino real* had few branches between towns; but soon after leaving Santa Cruz we found a branch on our left which puzzled us a little, as our map gave no indication of its existence. But we kept on almost a league, riding through a pine-forest on a nearly level road,—which proved to be the right one, although the choice was guess-work. Grass grew beneath these noble trees, and herds pastured in this park-like region. It was most interesting to see the acorns inserted by the birds in the pine-bark, precisely as I had often seen them in the forests of Nevada and California; but with all my watching I could not catch the birds at work. The acorns that I dug out, although frequently dry and apparently abandoned, were free from worms. The common species of pine (*Pinus macrophylla*) had "needles" fifteen and a half inches long; and the Indios were gathering them to strew the floors of the churches,—a more fragrant carpet than the rushes of our ancestors. We frequently came across artificial mounds, which,

according to Santiago, “were where houses had been.” At ten o’clock we halted at a little village which we were told was Uspantán (our wretched mozo Santiago, who pretended to be guide, but knew no more than we about the road, led us into this mistake); so we unsaddled and waited for almuerzo, with little to amuse us except two turkey-cocks, one white, the other dark, inseparable companions, who followed us wherever we went, and at last were driven nearly wild by their attempts to converse with us. Not until two o’clock did we arrive at the true Uspantán, and then very unexpectedly; for seeing some women at a spring washing, in a wild place where no houses were visible, we turned a low ridge, and found ourselves in the midst of a considerable Indian town. The church, which we did not enter, had huge buttresses at the apse,—doubtless a precaution against earthquakes. We saw a great deal of pottery, and anona-trees were on all sides; but the full-grown fruit was not ripe. We felt so provoked at our waste of time at the first village (whose true name we never learned) that we did not care to stop here, but rode out of the town through a deep artificial ravine. San Miguel Uspantán has some nine hundred inhabitants, who weave cotton from the lowlands and wool from their numerous flocks; and it is from the mines near by that all the silver was obtained for the vessels of the church,—so says tradition. Ruined walls and broken aqueducts attest the former importance of the place under the Quiché rule.

The road became a mere trail until we came to Pericon,—a village of two hundred inhabitants, whose only industry is wool-dyeing; and from this we climbed the pine-clad hills to a height of over seven thousand feet, where we came suddenly upon

a fine view of Cunen, directly west, but several leagues away, across a valley twelve hundred feet deep. I wanted a photograph; but the sun was in our faces, we could not spare the time, the day was almost done, and we had a difficult descent before us. Although we did not delay, it was long after dark when we rode into Cunen and found the Plaza, where we were assigned a good room in a confiscated monastery or church building. We had a mahogany bench fifteen feet long and sixteen inches wide for our bed, and a good table and several chairs abundantly furnished our apartment. We had our own candles and coffee; but no other food was to be had except some ears of green corn which we had picked by the way for our animals, but which we were fain to eat ourselves when Santiago had scorched them by the embers of the mozos' fires in the Plaza. Although the corridor was full of mozos who were to pass the night here, there was no noise whatever. We closed our door at six; and as soon as our notes were made, fell asleep. The poor Indios had no politics to quarrel over, and we had the satisfaction of a day well spent; so there was peace and harmony beneath our roof of tiles.

Every day the vegetation changed, and we might have constructed an itinerary of floral landmarks; to-day it was a fine pink dahlia far surpassing in vigor of growth and blossom any of the cultivated varieties. In such a climate, however, this plant did not provide for hibernation in its tuberous roots, of which it had none. Acres of fragrant Stevia perfumed the air, while Bouvardias and bright Compositæ brushed against us on either side of the narrow pathway.

Twelve hours of solid rest were not too much; and

while in the early dawn our *bestias* were being saddled, I strolled into the church, which is much smaller than its ruined predecessor at its side. In Central America the roofless walls of ancient churches usually, if not always, enclose a campo santo, and here the early Cunenans slept their last sleep among the crumbling relics of their work. In the modern church were two large mermaids of the genuine Japanese type, carved as supporters to the altar.

In the cold, misty morning we started without coffee, and at once began to climb a long ascent; for Cunen seems to be built on a platform on the mountain side. On our left was the finest waterfall we had yet seen, and on the banks were red violets. The summit of this pass was nearly seven thousand feet, and a sudden turn on a sharp ridge brought us to another region and a different climate. The transition was astonishing, for only a few rods behind we had left the rainy season. Before us was a vast valley bounded by forest-clad mountains and grassy buttresses; but near and far no sign of human habitation. The path we were on was the only token of man's presence, and that looked more like the dry bed of a mountain torrent than a public road. Broad-leaved agaves were very common, some crowned with golden blossoms on immense stems, some dead after flowering, still others wantonly hacked by the passer-by,—so we thought, in our ignorance, until the too-frequent mutilation of the tough stems showed a labor that could not be purposeless; and then we remembered that these "century plants" flower but once, after years of growth exhausting their entire substance in that supreme effort, and leaving a withered stem and shrivelled leaves, to be swept down the hillside by the next storm. Foiled in

its attempt to flower by the decapitating machete of the mozo, the plant lives on for a longer period, furnishing fibre and drink from its leaves. Anona-trees grew at the very summit of the pass, although we were assured that frosts sometimes occurred. Oaks of two species were abundant, and laurels were in blossom. A rancho built by the roadside, a sad travesty of the Dâk Bungalows of India, gave us at least a chance to boil our coffee.

A long and rough descent brought us to a pine-forest, whence at an elevation of six thousand feet we again looked down upon the valley of the Chixoy. Among the pines and oaks I photographed the view. The little white-housed town of Sacapulas on the hillside above the right bank of the light-green river which did not half fill its bed; the cultivated fields around; far in the distance the volcanic cone of Tajumulco,—the first we had seen, a token that we had left the limestone mountains of the Atlantic, and were looking on the fire-fountains of the Pacific coast,—all these and so much more in this grand view before us. We hardly noted the contour, the lines, the masses,—all that we could trust to the ivory plate that should carry it away; but the vivid colors in that clear atmosphere, the marvellous tints of forest, sky, and river, no photographic art could carry away, and we must enjoy it now by ourselves. The town was five miles away, and three thousand feet below us; and the descent was very difficult, owing to the sharp bits of quartz in the path. In the valley we came upon the huge cylindrical cacti (*Cereus*) used in fencing. Jocote-trees were abundant, but the small yellow fruit decidedly inferior. Sugar-cane grew to some extent in gardens, but fruits and vegetables were scarce. On the trees and fences hung a light-blue convolvulus,—the most attractive color I

ever saw; and this with a smaller white one brought the number of the “morning-glories” we had found so far to ten species.

Women were bathing in a spring near the road; the men seem never to bathe in public. Over the river was a bridge of six piers with simple hewn logs laid between them, no plank or rail of any kind, although the bridge was high and the current, even in ordinary stages of the water, very strong. As our bestias did not hesitate, we of course crossed with them. A short distance up stream were two brick and stone arches of a more ancient bridge extending from the town side. Several piers of the bridge we were crossing had fallen; but the masonry was good, and they generally held well together, forming bowlder-like masses, on which new piers had been built: in one case this process had been repeated. No doubt the bridge will soon break down again; and two wire cables are stretched from cliff to cliff to provide transit in case of accident. We went up a steep paved street to the Plaza, where Señor Placido Estada, the comandante, assigned us quarters in the cabildo, and exerted himself to find us a boarding-place. Whether the climate was favorable, I know not; but we were always very hungry when we were where food could be got: where it was wanting we did not care for it. Here we did full justice to the señora’s cinnamon-flavored chocolate whipped to a froth.



SACAPULAS AND THE CHIXOY VALLEY.

The church was small, and, like that of Cunen, built at the right of an older and much more extensive edifice now shattered by earthquakes and used only as a burial-place. We climbed the bell-tower and found one bell with the date 1683, another with that of 1773; all were bound to the supporting crossbeams by raw-hide thongs. The chief ornament of the Plaza was an ancient Ceiba-tree (*Eriodendron*) of immense size and traditionary antiquity. Below the terrace of the Plaza was a court, in which a fountain of odd design furnished water for the town. Animals were fed here over the gravestones that paved the court, and Frank remarked that in an earthquake country people chose *stable* ground for their graves. Our photographing attracted such a crowd that we walked away to the ruined bridge. Originally this was nine feet wide and about two hundred and fifty feet long. Its age we could not learn; but a large sand-box tree (*Hura crepitans*) seven and a half feet in circumference had grown up in the very midst of the paved approach,

tearing up the stone floor with its slow, irresistible power, and another large tree of the fig family was persistently fingering the cracks in the ancient wall. The tiles used in the arches were thin like those in old Roman structures, and the mortar was generally harder than the terra-cotta. Frank sketched the bridge, and we followed in thought the river until it became the Rio de la Pasion, then as the Usumacinta (the ancient Rio de los Lacandones) flowing through the richest land and most genial climate, by the ruins of the ancient cities of the earliest men, and among the villages of the unconquered tribes to the shores of that Bay of Campeachy where Votan gave his laws to the children of the forest.

Even in this retired spot we became an attraction to the unemployed on this Sunday afternoon; and we slowly sauntered back to the cabildo, measuring on our way the trunk of a dead ceiba-tree forty feet in circumference above the buttresses. A game of ball was going on under the tree in the Plaza. Wooden balls five inches in diameter, not very round, were shoved about with paddles. In the evening two young men, at the request of the comandante, played on the flute and guitar for us a number of Spanish airs.

In all these towns the *carcél*, or prison, is simply a room in the cabildo with grated windows and door, and separate rooms are often, but not always, provided for women. We saw but few occupants in the prisons of the towns we passed through.

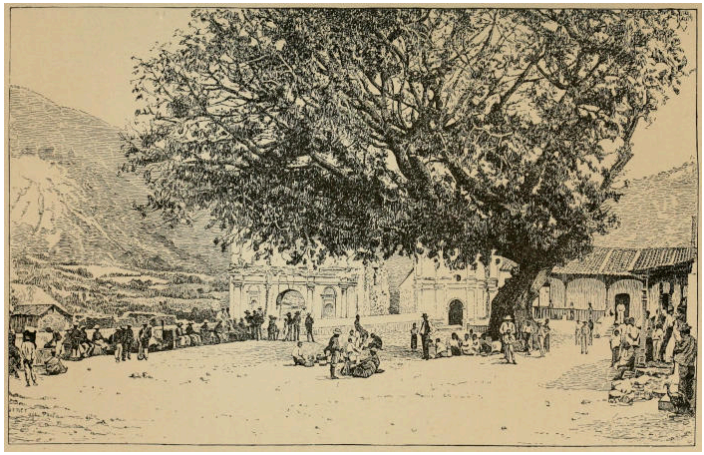
We made exceedingly comfortable beds of the public documents in the register's office, and I must confess to reading one of these marriage-records, which, as usual, was entered with great particularity, filling a folio page. Comfortable as this "marriage

bed" was, we were in the saddle the next morning at five o'clock; and leaving our adios for the kind comandante, followed the river bank for some distance in the mist. Not half a league from the town we came to a ruined church of considerable size, evidently shattered by earthquakes. Our path led directly through a campo santo, and even over the graves, which were usually covered with tiles crossed and edged with white paint.

We crossed the dry bed of a river,—certainly at some seasons difficult to ford,—and came upon a good level path extending along the river side for a mile; and then by a sudden turn we climbed out of the valley up a steep hill of decomposing rock, coming to a grassy plain on the top. There we met Indios loaded with pottery,—some with huge *cántaras* of red clay so large that two made a load; others with twelve fifteen-inch spherical pots, all of good workmanship.[13] The water by the roadside was all whitish, and not inviting. The highest part of the pass was 6,250 feet; only a few hundred feet below it we found a beautiful liliaceous plant, and some of the mozos we passed carried superb clusters of a purple orchid which we afterwards found parasitic on trees. Another valley and another steep gravelly slope to nearly eight thousand feet, and then we had a view over a vast extent of mountainous country. No lake or river relieved the thirsty landscape, though rain-clouds hung on the horizon and dropped their showers in the far west. Corn was in tassel; and where we rested at noon on a high plateau, 7,825 feet, we found it in milk. There we saw the maguey used as a hedge-plant,—and a very impervious fence it made. From this high land there was a gradual descent towards the south. Far away to the left we saw the church of San Pedro,

surrounded by its little adobe village, and soon we caught a glimpse of the still-distant Santa Cruz del Quiché, high enough, but seemingly in a valley, for mountains like the hills about Jerusalem guarded it on every side. The soil near the road was very thin, and covered what seemed to be indurated tufa. Deep pools of water were formed in this hard substance.

As we came at last, after a hard day's ride, into the uninteresting town, we found the streets all carefully named, as *Avenida de Barrios, salida por Mejico* (Barrios Street, the way to Mexico),—which was as useful as it would be to put a sign on the corner of Broadway, "Cortland Street, the way to Philadelphia." All the inhabitants seemed to be in the Plaza, listening to a band and watching some fair acrobats who tumbled on mats and swung on a horizontal bar. After waiting some time before the locked doors of the Hotel del Centro, the proprietor came home and let us in. Tough meat, frijoles, bread, and tolerable chocolate were all we could get; and the vile dogs were even more troublesome than usual. Our beds were made up in the dining-room, and we had pillows and sheets again,—the only good things this posada afforded.



THE PLAZA OF SACAPULAS.

The morning was overcast; but Frank and I walked to the campo santo, nearly a mile from town. High walls of adobe surrounded it, and a locked gate kept us out; but we peered in over the heaps of white lilies (*Lilium candidum*) and marigolds offered at the entrance, and saw masonry tombs of very bizarre forms, some painted white, others red and blue, or blue and white, in checks. The meadows all around were intersected by wide ditches which we had no little trouble in crossing, the bare legs of the natives rendering bridges quite unnecessary. When one was beyond our jump we threw in the washing-stones on the bank until we had enough for stepping-stones. Returning to town, we paid our respects to the Jefe politico, Don Antonio Rivera, who is a young man exceedingly polite and obliging, and we found practice made it much easier to converse than when we met the Governor of Coban. Don Antonio showed us fine specimens of the woods of his neighborhood which had been prepared for an exhibition in Guatemala City; but he could not tell us the names,

and sent for an old Indio who was better informed. This Indio also served to show us what the Jefe evidently considered a very amusing garment,—his trousers, which were in the usual black woollen *jerga*, cut up in front as high as mid thigh, so that they can be rolled up behind when the wearer girds up his loins to work. Cloths of various kinds were brought in for our inspection, and the prices given. These seemed high, for the material is only a *vara* (thirty-three inches) wide, and is sold in *vara* lengths. Not satisfied with showing us all that the market afforded, the kind Jefe furnished us with a guide to the ancient city of Utatlan, or Gumarcaah, and a mozo to carry my photographic kit.

A walk of three long miles westward brought us to a great disappointment. It is human to like what one has not got; Americans have an extreme respect for ruins, and we were no exception to the mass of our countrymen.

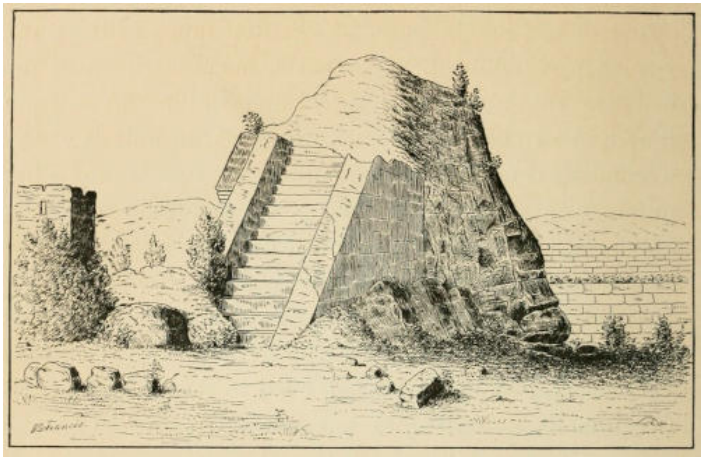
Stephens has described the remains of this powerful city of the Quiché kings, and has figured the very sacrificial altar of Tohil down whose steep sides were hurled the quivering bodies of the human victims. Three centuries and a half is a long period for people of a new country to look back over; but that time has passed since the Conquistadores destroyed the citadel and moved the inhabitants to the site of the present Santa Cruz del Quiché. Forty years ago the towers, faced with cut stone, the altar, some houses, and even the outer walls, were in good preservation; but all these have since been torn down, and the neatly cut stone removed to repair a miserable mud church in the town. These blocks of travertine were generally of uniform size, 18 × 12 × 4 inches; and mingled with them were blocks of

pumice cut to one third of this size. The Plaza was still paved with a smooth layer of cement exactly an inch thick, not unlike the *chunam* of the East Indies, and entire, except where the modern vandals had cut through it in search of foundation-stones which they are too stupid to cut from the quarries much nearer the town. Five towers are plainly visible still, though now but insecure piles of rubbish, the casing having disappeared. In several there are small cavities not large enough for rooms, but sufficient to serve as ladder wells, and under one our guide assured us was the entrance to a long tunnel extending to the distant hills; but when we insisted upon his pointing out the place, he utterly failed. Not an arrow-head could we find, although plain pottery in fragments was abundant.

The whole fortress was built on a promontory surrounded, except at one narrow neck, by steep barrancas several hundred feet deep; and to the rivers at the bottom there were probably tunnels from the summit, as the ancient Indios were very expert in underground work. It is from these tunnels, most likely, that much of the pumice-stone was obtained. Across the barranca towards the town are the remains of three fine watch-towers, from which a good view of the entire fortress, as well as of the surrounding country, may be obtained. Remains of other similar towers were seen far up the mountain slopes on either side, and from these the warders signalled with fire or smoke the approach of hostile visitors.

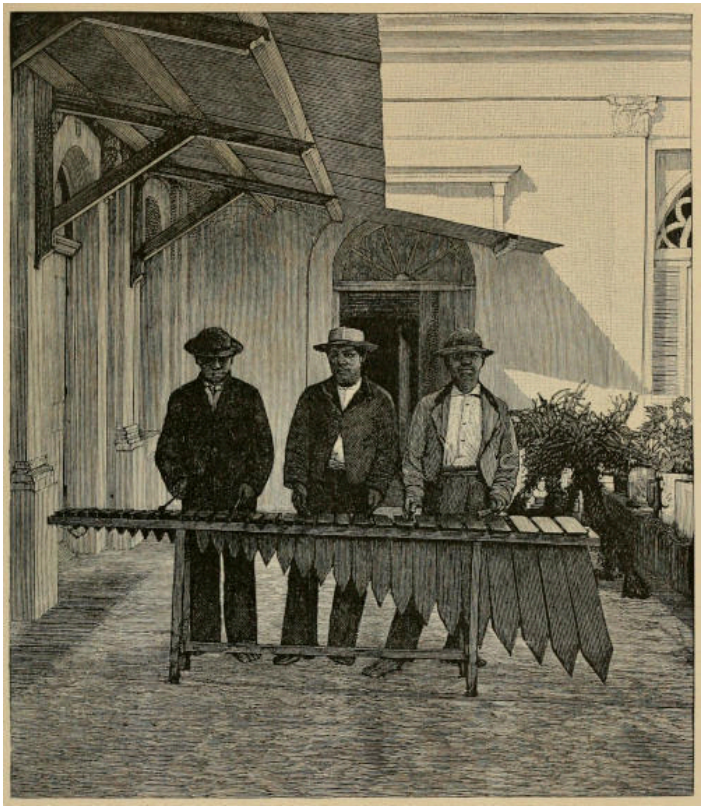
At the beginning of the present century the palace of the Quiché kings was in such a state of preservation that its plan could be easily traced, even to the garden. But unfortunately a small gold image

was discovered in the ruins; and this determined the Government to search for treasure, which tradition has always located in the ruins of Utatlan. In this search the palace was utterly destroyed; and hardly a wall would have been left standing had not the Indios, indignant at the wanton destruction of their once famous capital, become so turbulent that explorations were no longer safe. In 1834 a commission from the capital made a full and careful report on the condition of the ruins, and on this report Stephens largely rests in his interesting account of Quiché. Even in 1840, at the time of his visit, he found many traces which are now gone, especially the Sacrificatorio, which was a quadrilateral pyramid, with a base of sixty-six feet on the side, and a height, in that ruined condition, of thirty-three feet. One side of this awful relic of human misery was plain, though bearing traces of painted figures of animals; but the other three sides were supplied with steps in the middle, as may be seen in the illustration, taken from Catherwood's sketch. These steps were only eight inches wide on the tread, while the risers were seventeen inches,—a proportion that must have made the descent very awkward for the priests if they were as corpulent as the more modern monks.



Quiché Altar of Tohil (Sacrificatorio).

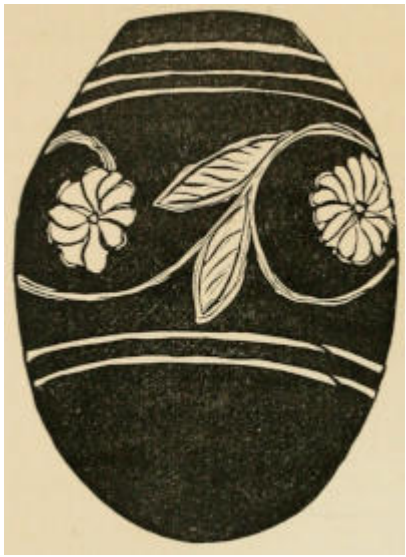
We met on our return a *marimba*, carried by two men, while the three players followed, beating out clear and agreeable notes. A frame between seven and eight feet long and twenty-nine inches high, supports on cords thirty strips of hard wood, beneath each of which is a wooden resonator duly proportioned for tones. The music was always attractive, and just now it drew a long procession in honor of the gymnasts of the day before, who followed the marimba on horseback.



Marimba.

In the Plaza we bought *jicaras*, or calabash[14] chocolate-cups,—three for a medio. Other interesting things for sale were small crabs dried on spits, dried shrimps of large size, raw cotton white and brown, floss silk, cloths both cotton and woollen, fresh and preserved squash, bread, sugar-candy, and *eau sucré* colored pink, tin-ware, pottery, ropes and bags of pita, leather sandals, sugar-cane, coconuts, baskets, and cheap foreign wares. In this town of six thousand inhabitants there are very few manufactures. We saw a woman boldly eating the game she caught in a

little girl's hair. I had before seen aged Hawaiian women engaged in this fascinating pursuit; but they always seemed ashamed to be seen by strangers. Not so the Quiché woman; the wretch even held her hand out for us!



Jicara.

To the fountain in the midst of the Plaza men and women came for water. The latter all carried their water-jars on their heads, while the men always slung them on their backs. Convicts were at work on the streets, or carrying stone for the church. They were chained in pairs, having shackles about the waist and ankles. The cabildo was the most important building in the town, as the parish church had so decayed that the walls of the entire nave had had to be removed. The new construction of adobe, with trimmings of stone taken from the ruins, will not last many years. The whole town looks dingy, and even dirty, owing to the universal use of adobe.

The roof-tiles are not so well made, nor so carefully kept in place, as in some of the smaller towns; but, on the other hand, some of the streets are paved, there are some side-walks, subterranean street-drains, and street-lamps or candles.

The Quiché Indios of the present day are not so good-looking as the Mayas. The women are badly dressed, and not neat; the men wear slashed trousers, loose jackets, closed in front and put on like a shirt, and in cold weather a narrow blanket, or poncho, with fringed ends. Some of these ponchos are figured, and most of them have a border, more or less elaborate, woven at each end. These Indios are small of stature and light limbed, with scanty but common beards, round faces, and small hands and feet; they are by no means as modest as those of Alta Verapaz, and evidently unused to seeing strange white men. Women carry their babies on the back while washing clothes at the fountains or by the streams. At home hammocks serve well for cradles.

Vegetation is not free from pests here, for we saw black warts on the oaks, and smut (*Ustilago serjetum*) on the corn. The corn-stalks are of the size and appearance of our field-corn; but the juice is much sweeter, and Frank considered it quite as good as that of the withered sugar-cane brought up here from the coast. Everywhere marigolds (*calendula*) scent the air, and bunches of them are wilting at every altar in every church.

The *fiesta* is in commemoration of the Conquest,—so we were told; and it was rather curious to see the degenerate Indios decorating their houses and holding high holiday far from the memory of the horrible tortures inflicted on their ancestors in this same conquest. Red flags hung from every door and

window,—fit emblems of the bloody event!

The excellent mozo Ramón Ghisli, who had come with us from Coban, was now ready to return. We would gladly have engaged this capital fellow to go with us all the way, but it was impossible; so I gave him extra pay, and with his *carcaste*[15] full of onions he started back on his long journey. Our mules were not very good, so we decided to send them back and get others here. Ramón had kept well up with the animals, had helped bravely in crossing the Chixoy, and had yielded implicit obedience to Santiago, who persisted in ordering about a man worth three of himself. Ramón got safely home, and delivered the mules all right.

A little alcalde in green spectacles exerted himself to find animals for us, as we were anxious to get away, since the hotel was full of dirty children and even dirtier dogs, and the food far worse than anything we had hitherto found. We had rain that night and the next day; but our new horses were brought in fair season. When we came to settle the bill we found the wretched landlord had charged seven dollars, given the bill to his wife, and hidden himself. Finding expostulation with the señora of no effect, I despatched Frank to lay the case before the Jefe, while I tried abuse; this had the desired effect of bringing the landlord from his hiding-place. I called him a *ladron* (robber), and, to the intense amusement of the many bystanders, described the meat he had set before us as *mula solamente* (nothing but mule). The boys caught the phrase, and we heard it shouted at the poor man until we departed. The Jefe sent the comandante and two soldiers to bring the “robber” to reason, and mine host thereupon told us to pay what we pleased. The comandante

suggested three dollars as the proper price; but we gave him four, and soon after nine o'clock we scraped the mud of this town from our feet.

The road led down immense barrancas, where we saw deposits of pumice some eight hundred feet thick. Mingled with this layer were large blocks of lava, seemingly ejected from some crater eruption; but where was the crater? We passed a little hamlet marked San Sebastian de Lemoa on the map; but all the people had gone a fishing on a lake near by, whose borders were swarming with ducks. Four leagues from Quiché we came to Santo Tomas Chichicastenango. This is a neat, attractive little village, hardly as large as its name is long, with clean streets, a fountain and eucalyptus-trees in the Plaza, and an ancient church. Close at hand are the ruins of an older town, which we, to our regret, had no time to visit. At the cabildo we were politely received, and our beasts of burden, both biped and quadruped, unloaded. The Jefe had telegraphed to Santo Tomas for horses and a mozo, and we were assured that after almuerzo these would be ready. In this faith we strolled about the town. The church, as usual, attracted our attention; and here for the first time we saw the Indios burning incense, which seemed to be gum copal, or precisely the same material their ancestors used in idol worship. Marigolds were strewed all over the floor, and the odor was oppressive, even without the incense and innumerable candles. The altar was covered with plates of beaten silver of no very good workmanship. An image of a man on horseback, with a beggar by his side, excited our curiosity, which was not destined to be satisfied, although our mozo declared it was Santiago (Saint James). We pushed our explorations outside the church, and climbed by an

external staircase to the organ-loft, which was floored with hewn boards not otherwise smoothed. An ancient organ, hardly larger than an ordinary davenport, stood in the midst, wholly apart from the bellows, which were worked by a suspended lever much as an ordinary forge-bellows. The keys were deeply worn by long use, horny fingers, or both, and they covered two octaves and a half; the stops were simply strips of hard wood projecting from the side of the case, and beyond the reach of the organist.[16] The locks on all the doors were of wood, and most primitive in design. All the worshipping Indios seemed very devout, chanting their prayers in their native tongue to the bare wall or a door-post, and they paid no attention to us as we passed them, although outside they generally bowed respectfully.

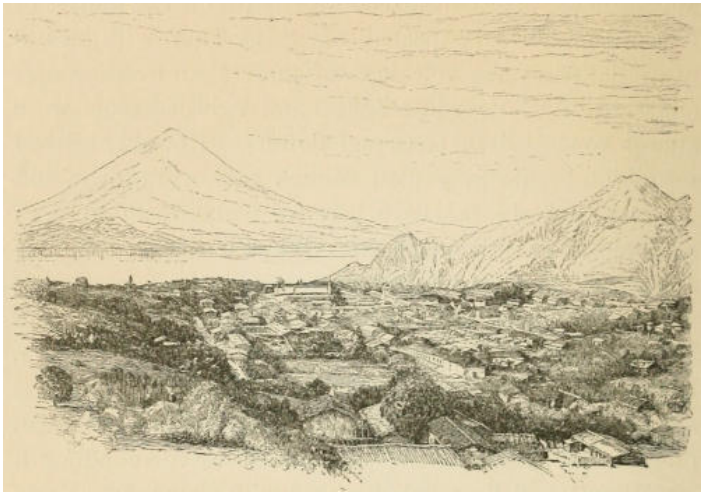
In a little shop at a street corner we found our almuerzo (there is no posada); and a very good one it was. Our hostess was a very respectable woman, whose house was well furnished (sewing-machine and rocking-chairs among other comforts), being quite a different person from the one who in our own country would occupy her position,—a rumseller. While we were waiting, two half-tipsy Indios came in, drank a small tumbler of *aguardiente*, and soon settled themselves quietly on the sidewalk for a drunken sleep, undisturbed by the passer-by.

Our way from Chichicastenango[17] led out over a narrow ridge or series of ridges, with deep barrancas on either side. The road was good, and hedged part of the way; but our animals were of the poorest kind. My little horse went slowly, and at last his legs seemed to collapse, and he came to the ground, leaving me standing over him. He was not worn out, he was a “trick horse.” For miles Frank and I walked

on, leading our bestias. It grew very dark and misty; lightning flashed in the distance, and the trees were dripping with dew. With every desire to get on to Sololà, we agreed that in the darkness it was unwise to travel, and we looked anxiously for a camping-place, although the muddy ground, dripping bushes, and threatening sky gave no hope of a comfortable night. Twice we were misled by the gleam of fireflies, whose glow is so steady that we mistook it for light in a distant house. As we could find no safe place for a camp, a high bank on one side and a seemingly deep ravine on the other bordering the narrow cart-road, we walked on in the utter darkness until we almost ran into two ox-carts with a squad of white-coated soldiers, who told us we had lost our path in the dark, and were on the road to Totonicapan, and a long league beyond Encuentros. We returned with them to the latter place, where we found comfortable lodgings in the house prepared for the expected visit of the President. We occupied his room, which was temporarily furnished with plenty of Vienna bent-wood furniture, and decorated with a full-length, life-size painting of President Barrios and a small portrait of his wife. Two bedsteads of the box variety were quite bare, as His Excellency always carries his bedding, and we did not. After some excellent chocolate, but no other food, we spread our blankets and slept.

How cold that Thursday morning was when we started at daybreak! The thermometer marked 46° at half-past six o'clock, and we were at an elevation of eight thousand feet. We had a fine carriage-road for our travel to-day, on which I used Frank's mare, while he tried his luck with my "trick horse." For a while all went well, and Frank made the little beast go ahead, while I stopped to pick up some lava

fragments in one of the cuttings; and so when Frank's turn came I could see perfectly how odd it looked to have a horse collapse under his rider. Along the road were elder-trees (*Sambucus*) pollarded like our willows; as, however, they were not shady, but in the way of fine views, we voted them a nuisance. It was down hill all the way, and as we approached Sololà the view of the Lago de Atitlan and the volcano was disappointing. We had surfeited, perhaps, on the glories of landscape, and had expected something finer, with an immense lake, several volcanoes of more than average size, and a town whose white houses and red-tiled roofs were almost concealed in trees and flowers. However critical we might be, we were glad enough to see the town, and not less to find a posada, where we had a room to serve as store-room and bedchamber. We at once sent back our miserable horses; and after reporting to the comandante, as in duty bound,[18] we strolled through the Plaza, sending Santiago in search of bestias for our next stage. Here we first found the ripe fruit of the sapote (*Lucuma mammosa*), and did not like it. The outside was brown, rough, and leathery; the meat reddish, surrounding a smooth nut, and the whole flavored with cinnamon. Some sapotes were as large as a coconut, but generally they were not half that size.[19] The Plaza was full of people buying and selling. Mule-trains came in and went out, and it seems that this is the great wheat-market. This grain (*trigo*) is small and round, and the Government officials weighed each bag, which should contain six arrobas, or one hundred and fifty pounds. Fat-pine (*ocote*) is also an important article of commerce here, as it is the principal source of candle-light among the Indios.



Sololà and Atitlan.

The church is large, but of no architectural pretensions; and among its contents we noticed several strange things. A figure of Christ, with glass eyes and long human hair, wore a crown cocked over his left eye like a drunken man. On the wall of the nave was a water-color drawing passably done, representing a young man falling headlong over a precipice, while through a sort of Lutheran window, or peep-hole, in the sky a rather young female is trying to catch him with a long vine. The legend states at length that the youth, in passing along the edge of the terrible precipice above the Lago one dark night (when he had been to his club), mistook the gleam of the water for the path, and forced his horse over. As he fell, he breathed a prayer to the “Mother of God,” and she opened her window and jerked him up again with a grape-vine. In testimony whereof he offers this tablet, etc. Near the main entrance was a large altar-piece, with a deeply sunken cruciform panel containing a very realistic

crucifix,—glass eyes, sweat, long hair, and blood-drops, indeed, everything that could make it disgusting to a civilized being; while from the five wounds proceeded skeins of crimson thread,—that from the side being much thicker,—and all these knotted together in a mass, black with the kisses of the worshippers of the blood of Christ. On one side of this panel were painted, life-size, Roman soldiers mocking the suffering Saviour; while on the other was a Guatemaltecan general, in full uniform, weeping at the sad sight, and using such an embroidered handkerchief as the nuns make at the present day. Just behind him was an attendant who had caught off his wig on the point of his lance. This last feature Frank interprets differently, and thinks the bald head is a shining casque, while what I call a wig is a flowing plume. With all due deference to his younger and brighter eyes, I submit that such a helmet was never a part of the Guatemaltecan uniform; and even if made of such close-fitting shape, would not have been painted flesh-color. Unluckily I did not take a photograph, to settle, if possible, this important dispute.

Frank was busily asking every one he met about mules; and we had not found any when, late in the afternoon, he met a gentleman walking alone in the public garden near the Plaza. He asked the oft-repeated question in Spanish, when, to his surprise, the person asked him if he spoke English. This proved to be the Jefe, Don J. M. Galero; and when told who we were and what we wanted, asked us to come to the Jefaturia in the evening. As Señor Galero was high in favor with the Government and beloved by his people, our very agreeable visit was interrupted by a serenade to his Excellency; and after he had promised to send us his own mules that very

night for our journey to Totonicapan, we took our leave.

The public garden especially interested me, since all the flowers (except an orange-tree) were such as I might find at home;[20] but times and seasons were sadly mixed. Pinks and gladioli, sunflower and white lily, all blossomed together. The fountain was painted blue and white,—the national colors,—and sadly disfigured the garden, which otherwise was not laid out with any taste.

Our apartment in this only hotel in Sololà was completely fire-proof; walls, roof, and floor were brick or tile, and several of the floor-tiles were deeply impressed with dog-tracks (made, of course, before the kiln),—much resembling the fossil footprints in the red sandstone of the Connecticut valley. A low table, one chair, a hardwood table called a bedstead, furnished this room; and there was one door and a single window,—the latter, with its iron grating, suggesting a prison-cell. It was clean and quiet, and good enough. It does not require long travel in the tropics to teach one that the less unnecessary furniture in a house, the fewer lurking-places for cockroaches, centipedes, scorpions, snakes, and other disagreeable tenants; and comparative emptiness decidedly reduces the temperature of a room. During the night my hammock broke down; and the sympathy Frank expressed as he was half-awakened by the noise, would have been very soothing had he not fallen asleep again in the midst of it, leaving me sitting on the floor. He continued his sympathy in the morning, when the dreadful jar was almost forgotten.

Early next morning we were on our way, mounted better than we had been; for we left Frank’s mare

with Santiago to rest for a week, and with the Jefe's mules we rode briskly on to Argueta,—a small hamlet with a deserted convent or monastery, in front of which flowed a clear cool brook, and near by was an *ingenio* moved by water-power. We got our almuerzo here, early as it was, for we were warned that we should find nothing to eat until night. From Argueta the road was very hilly, and we climbed until my barometer said 10,450 feet. Wheat abounded everywhere, and there were fenced threshing-floors of beaten earth. The mozos we met carried packs of woollen blankets and *redes* (nets) of pottery; several had pine-boards hewn smooth, three feet wide by eight long. In the trees were flocks of bright-green parrots. So many little streams had to be crossed that we often wondered if they were not, many of them, parts of one rivulet winding in devious way among the foothills. Except in the ravines, where we had to zigzag down and up while the toiling mozos patiently climbed the banks too steep for horses, the road was generally over a good country for road-building. In one place, however, we had to climb a stairway paved with stone set on edge and walled with masonry. In places earthen pots were built into the walls to collect water for the wayfarer, and tiles were used to cap the masonry. This extended more than a mile, and took us up just a thousand feet by the barometer. We could not learn its age nor the builders; but it is old, and some of the mozos attributed it to the Jesuit Fathers. It is much out of repair, and I fancy that most of the travel over it is on foot. The views were fine all the way; but we knew our journey was long, and the daylight all too short to permit us to wait for our mozos to come up with the camera. Indeed, I hardly cared to reduce to black and white the glorious colors the light was

painting on every side. The greens of the forest faded into the blues of the sky as in the turquoise, gold and silver glittered from the streams, and the very gray of the rocks seemed to be richer and more varied than usual.

On the hill-sides were ancient potato-fields only cultivated by digging the tubers; and this process has gone on for years,—the Indios digging at the bottom of the slope as potatoes are wanted, leaving enough for seed, and arriving at the top by the time the rains begin. As the small stems were quite dead and dried up, we could not ascertain the species of this aboriginal potato; but it was certainly not the common potato of cultivation (*Solanum tuberosum*). The Indios declared the potatoes had never been planted, but their ancestors had dug them from the remotest time,—*en todo tiempo, señor*.

Around us on the mountain-top were spruce-trees of immense size, four feet in diameter, and pines two feet larger; and beneath these giants of the forest flocks of black sheep were feeding, watched by shepherdesses not many shades lighter. As black cloth is much worn by the Indios, they cultivate the black sheep rather than pay the dyer. Cactus on pine-trees, crimson sage, and a minute violet not an inch high, were novelties by the roadside. Not a few of the pine-trees had been hacked with machetes until a considerable niche was formed in the stem; and the pitch dripping into this receptacle was then fired to light a camp. We found no villages on this road, but we were seldom out of sight of some herdsman's hovel. Late in the afternoon we came to the brow of the cliff that bounds the immense valley of Totonicapan on the east. The sun was low on the horizon before us, but I was absorbed in the beauty

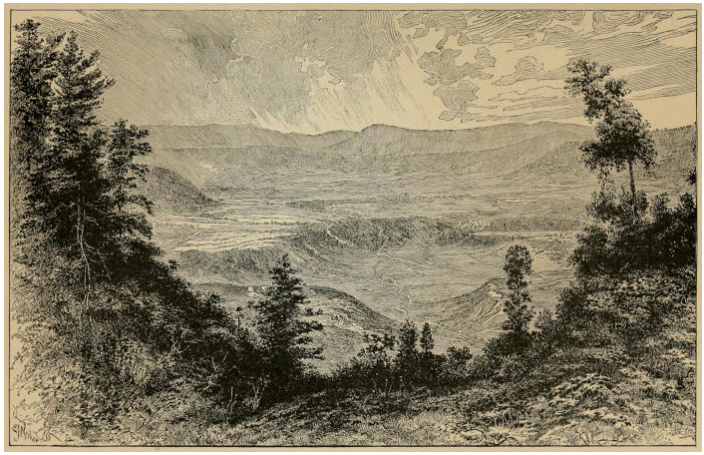
of this grand view. On our left a waterfall dashed over the rocks; below us were the white walls of the Indian City we had so greatly wished to see; roads and streams traversed the valley; and the whole surface, as well as the slopes far up the hills, was cut into numerous fields of wheat and maiz of many shades of green and brown. Far in the distance smoke rose over Quezaltenango, and the broad highway between was plainly visible for many miles. My mozo was close at hand, and in ten minutes I had two photographs caught in my box; after which we began the very steep descent.

We found lodging at the Hotel de la Concordia. Our little room contained three board bedsteads and one wash-stand. Usually we had no wash-stand, but either performed our ablutions at the courtyard fountain, or else had our valet Santiago pour water over us from a calabash.

As we had a letter to the Jefe, David Carney, I went at once to present it, in order to get our animals for the next stage as soon as possible. We found his house,—a fine one, the best in the town, with beautiful roses in the neat courtyard; but the Jefe himself was a dumpy little Indio, stupid and fat, who could say little else than “Si, Señor.” After some delay he promised us two mules in the morning. In his parlor I noticed a fine piano, evidently in use; and there was a decided air of comfort about the house,—probably due to the lady rather than the lord.

That night was very cold, and in the morning at seven o’clock the thermometer told forty-five degrees, and the barometer stood at 8,860 feet. As usual, we went to church; this was the largest and cleanest we had yet seen, but the images, including

an Indio-colored Christ, were perhaps more hideous than ever. The church has now the old Plaza (north of the new one) all to itself, and in addition a very large paved courtyard, with square chapels in the outer corners. In this courtyard we found a troop of Indian women conducting some mummery which required veils and candles, both of great size. Some of the poor women were so tipsy that they could hardly care for their candles, which were perilously near to setting their neighbors' clothes on fire. After various marches and counter-marches, songs and responses, the performance ended in a loud explosion. Of all the Indian towns, Totonicapan is supposed to be the most Indian, and the people are thorough idolaters still, with hardly the dimmest idea of the Christian religion. They moreover dislike foreigners, as we found to our cost. The fountain and sun-dial in the old Plaza were both much out of repair, and in the Plaza Nueva the fountain supported a traditional Indian fresh from the shield of Massachusetts. Made originally, as other men are, without clothes, he had been girt with stucco,—doubtless because of the cool weather and his damp station.



THE VALLEY OF TOTONICAPAN.

Generally the streets were paved, and drained in the middle. They intersected at right angles; and as the houses had few outside windows and the courtyard gates were almost always closed, the town had a very dull, deserted look. We did peep into some doors and windows, in a way I should hardly tolerate in any other barbarian; and by one of these window-peeps we discovered a weaver at work, who invited us to enter. The loom had two harnesses worked by the foot of the weaver, and twelve more pulled by a boy at the side; the bobbins were wound on bits of small bambu. It was a long way back in the series of the evolution of a modern carpet-loom, and yet it did its work exceedingly well, if slowly. This art of weaving has been practised in this city from most ancient times, and the Indios declare that the same utensils have been used, without essential modification. All the looms we saw were on one pattern, and they could hardly have been simpler. I bought for four dollars a large woollen bed-cover woven in elaborate design, which kept us warm

while we were in these highlands.

We called on the Jefe again as he was marrying several couples, and he repeated his promise to procure mules for us before one o'clock; so we left him for a while and strolled about town and found a potter at work. He used both white and dark clay, and his wheel and kiln were similar to those in use with us. At two the mules had not arrived, and we declared the Jefe a liar. Frank must have called on him twenty times, besides the visits of ceremony we made together three times a day. After a while two alcaldes came to our room and begged us to go to the cabildo and inspect the mules they had captured for us. Another failure; for there was not one fit to carry our burden. Then they brought two to the hotel,—one a pack-mule that refused to be saddled; then a mozo came quite drunk, and wanted a dollar to carry our baggage to Quezaltenango. We told him to go to the *diablo*, and he went; and so the day wore away.

On Sunday morning we went to the Plaza, captured a mozo without the intervention of the authorities, and started on foot for Quezaltenango. The weather was clear and cool, like a fine October day in New England; and there was white frost on the lowlands. At first we dropped rapidly down, and then came to a fine carriage-road, in some places a hundred feet wide. Except the steep descent at the city limits, and an equally steep ascent about half a league beyond, the road was level, and bordered with agaves, some now in bud.

Just before we came to Salcaja we had a fine view of the plain where Alvarado fought so desperately, was wounded, and finally conquered the brave mountaineers. Though conquered then, they certainly need another Alvarado now. A pale mist

covered the distant city, but above it towered the volcano Santa Maria,—a cone as regular as those of Sololà. Northward we saw San Cristobal and San Francisco,—two pleasantly situated towns. We crossed a river which flows into the Pacific at San Luis; so the backbone of the continent was passed, and we were on the slopes of the setting sun. We ordered our almuerzo in a little shop, and as we waited for it we watched the customers,—among them mozos, mostly for aguardiente, women for eggs, spices, chillis, and cord. Beggars came also, and among them an idiot girl (the only one of this class we had seen in the republic); one received a drink, another a handful of red peppers, and others food.

Before one o'clock we were in Quezaltenango, having walked six leagues in four hours and a half, excluding stops. The Hotel de Europe proved very comfortable, and the table was good. The Cerro Quemado (Burned Mountain), just overhanging the city, was a more attractive volcano than the loftier Santa Maria; and I longed for time to climb to the broken crater from whose blackened sides the huge lava-stream had descended towards the city (the ancient Exancul), turned suddenly when almost upon the outer walls, and then stopped forever.

The market-place was very attractive; for besides the bustle of the builders, who were piling up the cut and sculptured stone of the most imposing public edifice I have seen in Guatemala, the many cloth-merchants exhibited their brilliantly colored merchandise to great advantage. This is the centre of the trade in native cloths; and many beautiful and durable fabrics are woven here and in the neighborhood from cotton and wool. The stone generally used in building comes from the volcanoes

back of the town, and is a light-brown lava. The Plaza is double,—one half bounded by the church of San Juan de Dios, the stone penitentiary, and shops; and its space is occupied by a garden surrounded by a wall of carved stone and provided with stone seats. A pond in the midst has a pavilion, or band-stand, on an island. The other half of the Plaza is paved, and used as a market-place; here are the new buildings for the Government.

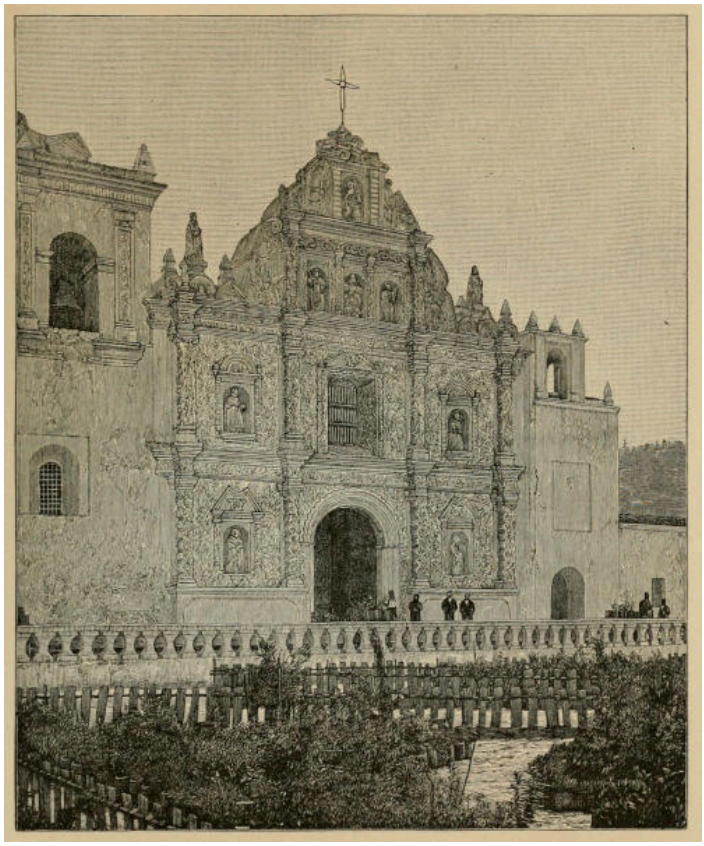
Near by the hotel I saw a sign, of which I made a note, thinking to profit thereby; but Frank saw it more clearly than I did, and knocked all the romance out of it. To my first glance it read, “Collection of Young Ladies,”

COLEGIO NAL. DE SEÑORITAS

but to the critical eye of my *fidus Achates* it was simply a National Seminary of Young Ladies; so we did not venture to explore it.

The church of San Juan de Dios was large, and the façade ornate,—worthy the principal church in a city of twenty-five thousand inhabitants. The old organ, of four octaves, had been recently painted; and in the two towers hung seven bells,—three bound to the beams with rawhide, as usual, the others on yokes. The cloisters adjoining this church[21] were interesting, from the multitude of curious paintings they contained, mostly of Scriptural histories; and in them Christ was always represented as a shaven monk, with the girdle of the Cordeliers. In the old lumber-room of the church were the remains of an ancient organ, and heads, bodies, and arms of saints, —not relics, but the *membra disjecta* of the dolls that are put together and dressed up on holy-days. We had often seen similar places, which Frank called “property-rooms;” in one we found boxes of wigs and

beards, and in another a figure of Christ with permanently bent legs, and staples in his ankles to strap him on to the mule on Palm Sunday! It was both amusing and pitiful to see the trash used for religious purposes.

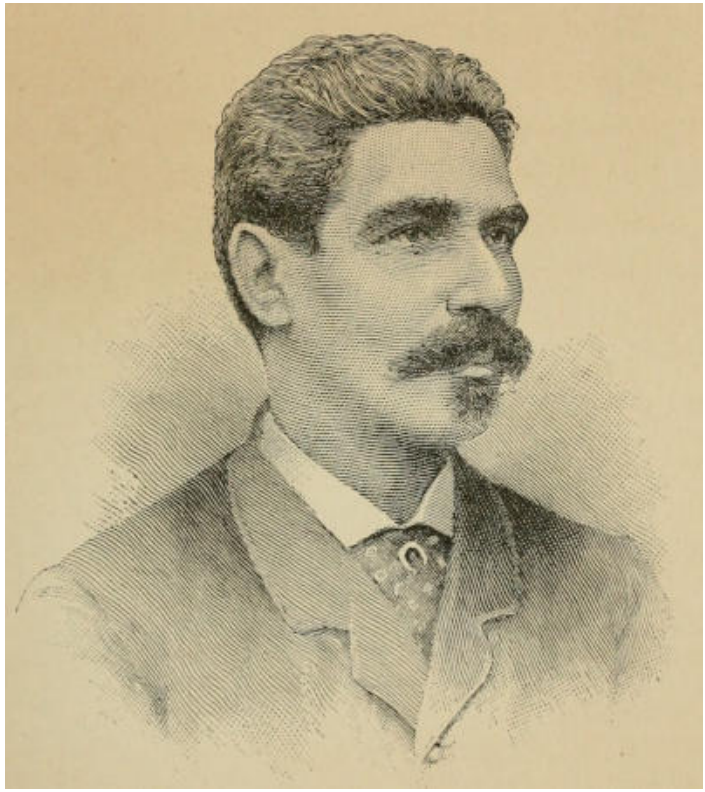


Church at Quezaltenango.

We went to the National Institute and saw very good dormitories for the young men who study here. In preparation for an expected visit of the President, lanterns were hung along the colonnades, and blue and white (the national colors) met the eye on every

side. There was something homelike in the narrow, crooked streets,—so different from the tasteless rectangles of most other Guatemaltecan cities. Then, too, they were clean, well paved, and provided with sidewalks,—in some places, where they were very steep, with bridges over the gutters, which in rainy weather must be torrents. Street-lamps and letter-boxes, plenty of fountains (and the water is cold and excellent), gave an air of civilized comfort very agreeable to us. The houses were well built, and usually had the window and door-jambs of sculptured stone. There were plenty of windows, and the gates were often ajar, revealing flowers and fountains in many courtyards. Peach-trees were in blossom, and also bore half-ripe fruit. In the suburb Cienega is a picturesque washing-place, or *lavadero*, where an artist has many a chance for sketching the Indias.

We saw more tokens of Sunday observance than we had yet seen in Guatemala. Towards sunset the military band, of twenty-five instruments, played for some time in the garden; but it was more amusing to me to see the people with their obsolete European costumes and Sunday manners than to listen to the music, which Frank said was good. Especially effeminate boys wore very high heels, to give them a standing in society they could never attain otherwise. The garden was not so good as that at Sololà, but contained, in addition to the list of that place, oleander, daisy, wall-flower, pink-catchfly, bachelor's-buttons, flax, and Canterbury-bells.



Manuel Lisandro Barillas.

A city of nearly twenty-five thousand inhabitants—the majority Indios—has grown up gradually on the ruins of the ancient Xelahu, until it is only second in importance to Guatemala City. Its port is Champerico, from which a railroad extends some distance into the interior (to Retalhuleu, 1884), and will one day enter the city. Abundant water-supply, schools of various grades,—including a night-school for artisans,—a good hospital, female orphan asylum, convenient public buildings and a suitable penitentiary, a bank, public lavatories, and the hot springs of Almolonga, are but some of the attractions

of what was once the capital of the province of Los Altos.

We had letters to the Jefe politico General Manuel Lisandro Barillas; but he was so occupied in preparation for the visit of the President that we thought it best not to add to his occupations by calling on him. On the death of President Barrios, General Barillas succeeded to the Presidency; and so satisfactory was his administration that at the next election he became President by popular vote.



Four Alcaldes of Quezaltenango.

Monday morning was quite cold and misty; but we photographed the church, with the kind co-operation of the resident curate, Padre Felipe Sora, who lowered curtains, opened doors, and did all he could

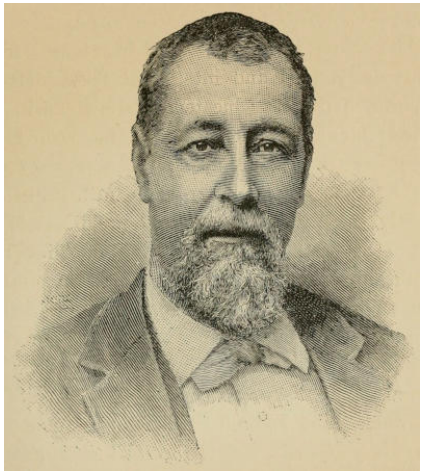
to help us. When we took the exterior we attracted a great deal of attention; and fortunately the chief alcalde, who had assured us that we could get no mozos that day, as it was a *fiesta*, in honor of the President, noticed our performances, and, being a personable man, was seized with a strong desire to have his *ritrato*. He offered to get us our mozo if I would only photograph him; so I bade him to the hotel, explaining to him that the portraits could not be seen until I returned to the North, and that I should charge him a dollar for each picture. Honest soul! he agreed to all this; and on his way he joined to himself three of his colleagues. I sent them the result months after, and in due time the silver dollars were scrupulously returned. In the mean time our alcalde Florencio Cortez provided our mozo, and we started to walk back soon after two o'clock. We both hoped to see this pleasant city again.



Cuatro Reales of Honduras.

CHAPTER V.
FROM QUEZALTENANGO TO THE PACIFIC.

Our little mozo was only fifteen years old, and his load was so heavy that we had to wait for him at every turn in the road; until, after helping the poor little fellow for miles, Frank took the load himself. As we reached the high ridge where there is the last view of Quezaltenango, we noticed that all the mozos—of whom there were many on the road—looked back at the city and removed their hats, as if in salutation. We did not reach the hotel at Totonicapan until nearly eight o'clock; but we had no trouble in the clear night,—except in trying to get a drink at a way-side fountain, into which we nearly tumbled headlong.



J. Rufino Barrios.

The President arrived in the morning with a cavalcade of thirty riders and several large mule-wagons. The Plaza was deserted, and the streets almost empty. All the Indios kept within doors, and evidently were not anxious to honor the chief magistrate. The usual nuisance of soldiers, however, was there; and it was very amusing to watch them fire the guns in the Plaza for a salute. To obtain animals was our first desire, and we telegraphed to the Jefe of Sololà, who had promised to send his mules; but he answered us that he could not, as he was called away, with all his attendants. So we seemed to be imprisoned in this Indian city, and I resolved to apply at headquarters. Not expecting to meet the President out of Guatemala City, I had no letters with me, nor even any suitable attire for a visit of ceremony; but there was no alternative, and through one of his attendants I obtained an appointment for the evening. In the mean time we wandered impatiently about the town. In the church, over the main altar, we saw, what had before escaped notice, three life-sized figures representing God and Christ kneeling to and crowning the Virgin Mary, over whose head a dove hovered. God had a white beard and *bald head*, while Christ's hair was black. Neither this Quaternity, nor anything else we noticed in the service of religion here, surprised me; though the shudder of disgust was stronger than when I stood on the threshold of the sanctuary of Kali, near Calcutta, and saw the hideous idol with its gory lips and necklace of bleeding human heads.

In the evening the President received me very politely in the *sala* where we had called on the Jefe. I stated my case, while Frank looked in at the window. Señor Barrios was much better looking than he appears in his portraits; he was not a large man, but

muscular, and with a very determined and intelligent face. His little daughter, who had been educated in New York, acted as his interpreter; and never, among the scores of interpreters I have had in many countries, have I found so capital a one. Once only my Spanish failed me; and instantly the little girl repeated in idiomatic, concise English, her father's question. I told him I had more important business with him at the capital, but that at present I wished only the privilege of hiring or purchasing bestias for our journey to Sololà. He at once summoned the stupid little Jefe and asked him why he had not furnished us as we requested. "No háy" (there are none), replied the Indio. "Then make some before to-morrow, or you shall suffer for it!" said President Barrios; and told me to let him know if they were not furnished us in the morning. Next day the Jefe offered us his own mule; but his wife, a perfect shrew, declared it should not leave town. If I had liked that Jefe better, I would have wished that the mule might run away with his wife and break her neck. At last he got us two good horses, for which he would take no pay, as we were *amigos del Presidente*. A mozo was included in this arrangement, and we started him at noon, we following soon after two. We shook off the dust from our feet, and were glad enough to leave Totonicapan, where we had found the Indios so impudent and disobliging that at one time I feared I should have to shoot some of them with my revolver in driving them from my door.

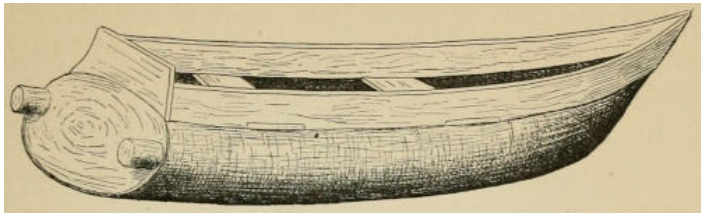
After the first steep ascent of twelve hundred feet, we rode rapidly over the level plateau; but with all our haste we could not get to those steep and difficult stairs before dark. Luckily we overtook two ladinos, who rode with us; and we consequently were saved by their guidance the discomfort of a

camp in the cold night. At Argueta we were put into a large room in the deserted monastery, where we had some excellent coffee. In the middle of the room we made a fire of the fat-pine that we had gathered in the mountain in preparation for camping out, thus taking off the chill which is very decided in these high altitudes; and the clear burning chips of *ocote* did not smoke us out.

We were up at five next morning (*muy temprano*); and although it was still dark, got our coffee and started for Sololà. In the corridor of the monastery was a large pile of an odd-looking corn, the kernels shaped like rice-corn, but yellow, and much larger. Six grains, which I brought home, were planted in Worcester County, Massachusetts, and they all grew, —some to a height of seventeen feet, with a diameter near the ground of three inches. The season, however, was not long enough for them to ripen.

In the pale dawn we saw the distant volcano of Fuego smoking. We rode on briskly in the cool morning, getting to our hotel at eight. Certainly this was the best and fastest ride we had in Guatemala. We took no time to rest, but at once proceeded to photograph the town. After almuerzo we climbed down to the Lago de Atitlan by a path about twelve hundred feet in perpendicular descent. It was a league and a half from town to shore. We were in another climate. Oranges, sugar-cane, avocados, limes, jocotes, and other fruits that cannot bear the cold of the town above us, flourished here. Walled on every side by vast cliffs, and overshadowed by high volcanoes, there were yet fertile valleys opening on the Lago here and there. Streams of considerable volume pour into it over rocky beds, or dash foaming down the high cliffs. Ten miles across was the

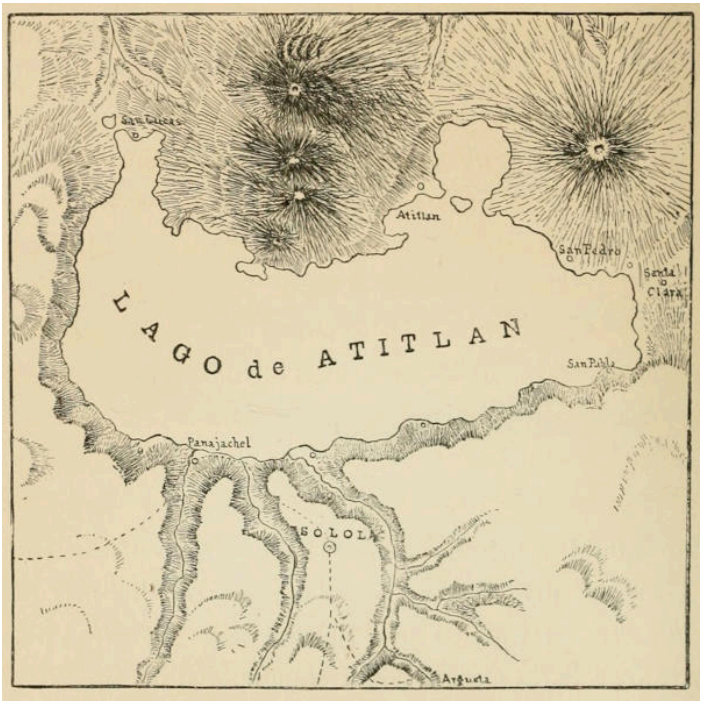
ancient town of Atitlan, famed in legend and history. We stood in one of those mysterious places seemingly below the rest of the world, for we could see the water fall into this valley; but no human eye sees the outlet, nor are the waters, as in the valley of the Dead Sea, chiefly evaporated. The surface is evidently of nearly the same level at all seasons. In the opinion of some observers it is not improbable that this valley was an ancient crater, in the midst of which the volcano of Atitlan has risen,—much as Vesuvius has sprung from the ancient Somma; but the more probable origin of the lake is that the rising volcanoes dammed up a valley. In the lava are many cavities, and possibly through these the surplus waters flow, to reappear in the many copious springs of the southern shore. We were minded to try the truth of that strange assertion of Juarros that the waters are so cold that all who venture in have their limbs frost-bitten and swollen. The water was clear and sweet, and we waded out some distance before there was depth enough to swim. From the sandy bottom rose abundant bubbles,—probably of carbonic acid, as they had no smell. It was a most refreshing bath,—cool, but not so cold as the old historian reported. A new experience, as we stood drying on the shore, was a shave with pumice-stones, which abound here. A little care is needed to avoid taking the cuticle away with the hair; but these stone razors are admirable substitutes for Sheffield steel, and are always sharp. Water-fowl were abundant, and very tame. A good survey of this lake would be of great geological and antiquarian interest; and we will speak of its depth and formation in a later chapter.



Boat on the Lago de Atitlan.

We should much have liked to cross the lake to the ruins on the other side; but the sight of the only boats on the lake, as well as our limited time, deterred us. I have never before seen boats constructed on these lines; the handles on the stern seeming necessary to lift the large, clumsy craft out of the water.

Oh, the hot climb up that hill to Sololà! We started at half-past one, and did not get back until six; and were then so tired that, soon after comida, we fell asleep, in spite of the music and rockets within a few rods of our bedroom. The decencies of life are much neglected here, as elsewhere in Guatemala, and our only washing-place was the veranda-rail, over which we leaned while Santiago poured a calabash of water over us. Those who have travelled in Central France will have some idea of the privies of Central America, where they exist in any form,—indeed, if it were not for the hungry dogs, who act as scavengers, the streets would be in a most disgusting condition.



Sketch Map of the Lago de Atitlan.

All this day the mountains were clear; but on the morrow the clouds came down again. We called on the Jefe to say our adios, and found that neither he nor his secretary could tell us the names of the immense volcanoes before his very eyes every time he went out of his house-door. However, he called in an old Indio, who pointed out the distant Fuego, Agua, and Pacaya, and the nearer Atitlan, San Pedro, and Santa Clara. All these volcanoes have been duly baptized into the Church, to induce them to act as good citizens and *christianos*.

The Jefe had promised me his mule, and Frank was to have the horse of the alcalde, as his mare, Mabel, had a sore back from the breaking of the

tenedora, or crupper, on the journey to Sololà. We secured for a dollar and twenty-five cents two mozos to take our luggage—much increased in weight by the cloths we had purchased in Quezaltenango—as far as Antigua, and at noon we started. Frank's little mare was a character. She took the saddle all right; but when he tried to bridle her, she rose on her hind-legs and proposed a boxing-match. Frank very naturally declined, as he had no fists to match hers; and as Santiago and the mozos had been sent ahead, we hardly knew what to do, until an old Spaniard kindly came to our aid and taught us a trick. He tied some rope around the creature's left ear,—a proceeding to which she made not the slightest objection,—and inserting a stout stick and twisting the rope so as to have a firm hold of the ear, I was able to keep her down while Frank put on the bridle. She was perfectly still as long as her ear was in limbo, and did not seem to suffer; but it was useless to try to hold her by *mane* force or by the nostrils. Every time she was bridled we had to go through the same process.

We first rode down a very steep grade, sixteen hundred feet, to Panajachel,—a pleasing village a league and a half from Sololà. Here are cultivated fields on the borders of the lake far surpassing anything of the kind I saw elsewhere in the republic. They are completely irrigated by the water of many brooks, some of which make cascades by the wayside. Panajachel is the garden of Sololà; with about twelve hundred inhabitants, it has, besides its agricultural advantages, various minerals and especially fine clays. Hot-springs come to the surface on the lake shore. The road was being repaired, and we had to travel slowly,—glad, however, of the excuse for loitering, as the views of the lake and

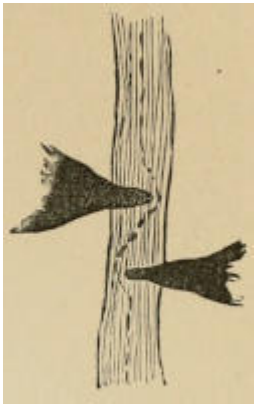
valley were not to be lightly passed by and forgotten. Then came a long, slow climb of fourteen hundred feet to San Andres Semetabaj,—a town of seventeen hundred inhabitants, which showed us as its only attraction a ruined church with a remarkably fine dome; even Sir Christopher Wren never designed a finer. On this long climb we lingered to photograph the last view of the Lago de Atitlan and its volcanoes. The sun was in our faces, and shone over the silvery waters with the effect of moonlight. The three black giants—once so terrible, now so solemnly grand—kept back the surging sea of cloud from the Pacific that seemed struggling to climb their sides and reach the lake. Not a boat, not a human being, was visible as we looked our last on the beautiful lago and turned to a road quite unlike any we had travelled before.



LAGO DE ATITLAN.

And now every day brought a quite new experience, as not merely the flowers and vegetation, but the very physical aspect of the country changed; and, strangely enough, the night was the *entr'acte*.

To-day we were crossing the immense wrinkles of the earth, while from Chichicastenango to Sololà we had travelled with them. As we went up and down, the light faded; and we still had three “wide rivers to cross,” as well as many leagues to ride. As we passed the camps of the mozos de cargo the bright light of their fires dazzled us and made the road some way beyond seem much darker. We came at last to a plain. Here the good resolves never to travel in this country after dark, made when we lost the road at Encuentros, were renewed and strengthened; for every now and then we saw in the dim gray path what looked like ink-puddles, but, to our horror, as we were about to ride through one, we found it to be the head of an immense barranca which was gradually eating its way into the plain over which the road extended. The walls of this barranca were perpendicular, and apparently thirty yards deep; and it was only one of a dozen intersecting our path. I have never since then passed a dark spot in the road at night without thinking of those awful abysses lying in wait to entrap the unwary traveller. Evidently few here travel after dark. In places were hedges of agave, and we saw here and there a house; while the barking of dogs became more frequent, and we at last, about half-past nine, rode into Patzùn. We had no little difficulty in finding where the posada was; for Santiago, who led Mabel, did not like to leave the road, and the burden, as usual, fell on Frank,—who, fortunately, was well able to bear it. The inhabitants were all in bed; but he at last aroused a man to direct us, and we found a good posada, with a comfortable room, clean beds, and hot chocolate.

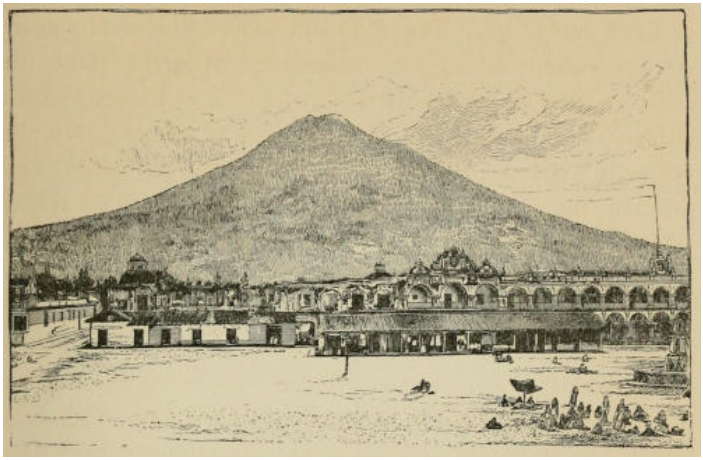


Washout in the Road.

We slept long, and did not get our early meal until eight. Santiago added to his disrepute by failing to find any *sacate* (green fodder) for the animals, while Frank found a supply at once. We always had to buy or pay separately for our sacate and corn; seldom was either to be found in a posada. While our bestias were feeding we went to the church, which had a curious campanile decorated (?) with sculptured angels at the angles. Inside, there was a wedding,—the couple kneeling within the chancel-rail under one red shawl. The officiating priest seemed to be an Irishman. As we rode out of town we passed a public fountain, to which excellent water is brought from a distance of several miles by a very ancient aqueduct. The fountain was of the usual form,—a column more or less ornamented rising in the midst of a circular or polygonal basin, which catches the water falling from one or more spouts near the top of the column. From this common basin horses drink and women dip water, the spouts being quite out of reach. The Indios place their water-jars on the edge of the large basin and conduct the water by a bambu pole just long enough to reach from the spout to the jar.

At eleven o'clock we reached Patzicia, but did not stop even to examine the ruined church. The evening before we had noticed a long cliff some ten feet high, —evidently caused by a comparatively recent subsidence; and here we saw other evidences of earthquakes in remote ages before the present town was built. On the trees by the road was a beautiful yellow bignonia, and in the yards we saw fine double pink and white dahlias growing as trees,—fifteen feet high, and with stems eight inches in diameter. Chimaltenango, the head of this Department, did not interest us, and we did not linger.

The road was level, but winding and dusty. We were approaching the volcanoes Agua and Fuego, which kept changing their relative position in a very puzzling manner. Several small hamlets—San Lorenzo, San Luis, Pastores, and Jocotenango—served as milestones on our way. Near the last place we discovered a man on fire in the road; and it was no easy matter to extinguish the conflagration. Tobacco did the mischief, and aguardiente prevented the senses of the poor Indio from working fast enough to save much of his clothing; and as we rode away we saw his companions stripping the smoking rags from his singed body. About dusk we came to the Hotel del Commercio in Antigua, the capital of the Department of Sacatepequez.



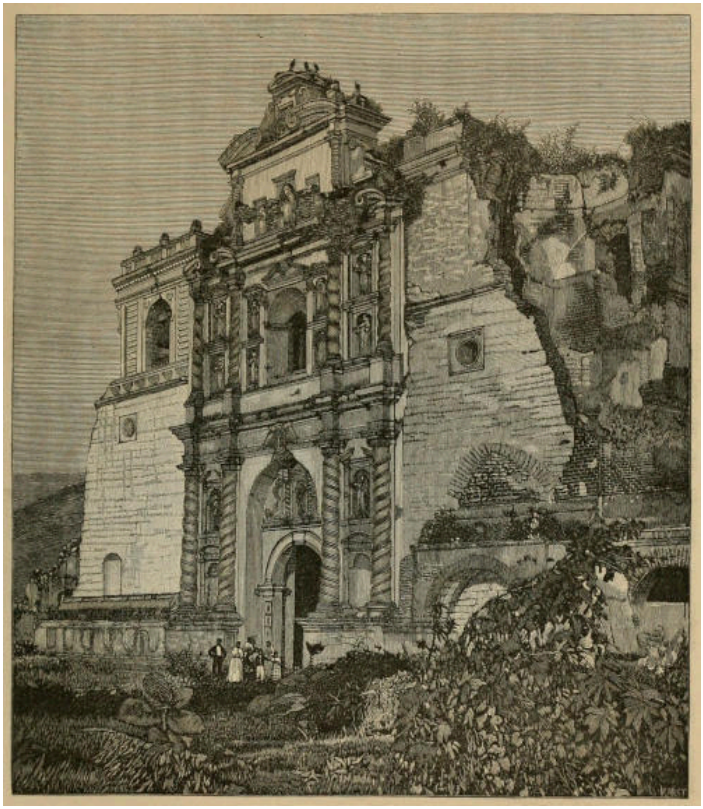
Antigua and the Volcan de Agua.

Early Sunday morning we went to the Plaza, and from the second story of the cabildo photographed both the great volcanoes Agua and Fuego. Directly before us were the ruins of the palace of the Viceroy, the arms of Spain carved in the stone, which still stands firmly, a century after the terrible earthquake which shattered the rest of the building and ruined the whole city. On the left stood the roofless cathedral, and dotted thickly over the plain were other ruined churches,—eighty, it is said,—which looked as if recently demolished. We had our *bestias* saddled, and rode over to Ciudad Vieja, distant about a league. This was the second city founded by Alvarado (Tecpan Quatemalan being the first), and destroyed, together with the widow of the Conquistador, in 1541, by the earthquake and torrent of water from the ancient crater of Agua. The town is small enough now. After watching a man make *roquetas* (rockets),[22] we rode to the Baños de Medina, which we had some difficulty in finding; we took, however, at last a short cut through a coffee

plantation where the berries were large and ripening. The baths are in a small house of several rooms. The one Frank and I occupied had a large tank, deep enough for a swim; the water was slightly sulphurous, and but a few degrees warmer than the atmosphere. It was well worth the real it cost us.

In the afternoon we strolled among the ruins of Antigua, which are very fascinating. All the churches were of solid masonry, with vaulted roofs,—some still entire, and supporting a mass of vegetation, among which the Phytolacca was common. The outlay of money in building all these elaborate churches must have been enormous for material and transportation (many of the tiles being Spanish), although the actual labor was by unpaid slaves. We were told strange stories of the skeletons of mother and child found walled in a church; tunnels connecting the churches and nunneries just outside the city; infant skeletons in a vault of one of the nunneries, etc. With these romantic associations in mind, we poked hither and thither among the mighty ruins; but we found only the curiosities of architecture (of these there were enough to occupy me many days) and the traces the treasure-hunters had left in the walls. Frank found in one of the vaults a well-drawn fresco covered with a thick coat of whitewash, and we tried to pry off a portion; but could not succeed without too much damaging it. Horses were pasturing on the grass-grown roof of a part of one of the churches, and a few had portions still in use as places of worship, while another was occupied by a blacksmith. In one of these we saw some finely carved wooden panels. All about the city eucalyptus-trees had been planted. The roads are very good, and the *alameda*, or public promenade, is attractive. The corner houses often had most

comfortable projecting windows, so placed that one could see in both streets at once.



Ruined Church in Antigua.

There are two industries in Antigua of considerable interest to the visitor,—the carving of cane-heads, which is done in a most artistic manner, equalling, perhaps, the famous ivory carvings of Dieppe, in Normandy; and the manufacture of dolls, or effigies, mostly of cloth, representing every costume and occupation of the Indios. These little figures—seldom more than five inches high—have often an expression that would not be thought possible,

considering the material of their fabric. Sololà is another place where these dolls, or *muñecos*, are made,—a single family, I believe, having the monopoly; but in Antigua we found a much greater variety. Especially good are their figures to represent the Nativity of Christ; for it is customary in many of the towns to keep open house at Christmas-tide, and each household tries to provide a Bethlehem,—much as in Germany a Christmas-tree is arranged; but the groups of Shepherds, the Wise Men from the East, as well as the Holy Family, are often made in the most careful and artistic way, all from bits of cloth.

Here I bought my first mule, paying for her eighty dollars in Guatemaltecan money (silver of the value of the buzzard dollar of the United States), the purchaser giving United States gold at twenty per cent premium; consequently the mule cost really sixty-six dollars and sixty-seven cents. After riding her two months I sold her for a hundred dollars. We engaged two mozos de cargo, and then felt at leisure to look more about the city. Near the hotel was a *chichería*, or place where *chicha* is sold. This drink is here made from jocotes, and the cider-like beverage is drunk from pint bowls or calabashes. Intoxication follows; and we frequently heard women shrieking in the arms of men, while unearthly yells and laughter greeted the outcries. Owing to indulgence in this dissipation, our mozos could not walk in the morning, and we spent some hours in searching for others. The best we could do was to get one for six reals to take our carcaste to Ciudad Vieja, the Jefe at Antigua giving me a requisition on the comandante there for another. We sent Santiago with a drunken mozo direct to Guatemala City; and we afterwards found that the wretched mozo, when well out of the

city, dropped his burden and ran away, compelling Santiago to get a substitute, with whom he arrived safely.

For ourselves, we retraced the road of yesterday to Ciudad Vieja, and found the cabildo, where the soldiers captured the necessary mozo,—literally at the point of the bayonet; but he was a capital fellow, in spite of his forced service. While the hunt was in progress, we looked about the town; but there was not much to see, except the elaborately wrought doors of the church. There were few indications of the awful ruin the flood from Agua had brought upon the town in 1541; but some of the buildings seemed to be partly resting on substructures of older date. Some of the slaves in uniform called soldiers told us we could not go into the presence of the comandante without taking off our spurs; so I haughtily declined to go in, or even dismount, and ordered him to come out and receive the Jefe's letter. He meekly obeyed, seeming to be a very decent fellow. Clouds covered both volcanoes, and our road led southward between them. We had a good enough road, down hill constantly, and winding into the valleys on the side of Fuego,—often crossing fine streams of clear cold water. The crater of the volcano was still smoking,—as it has been since 1880, when there was a slight eruption. We could see that the crater-wall was broken down to give issue to what looked more like scoriæ than lava. Gases have acted extensively on the whole summit, which displays many colors, from the decomposition of the lavas.

As the day closed, the road became bad and full of small stones. The foothills were capped with irregular masses of lava, which in the sunset looked not unlike the ruined castles on the Rhine. We were

in the region of canefields, and we often caught a glimpse of the Pacific Ocean. At seven we rode into Escuintla and found the hotel comfortable enough; but all night there was a horrid noise,—drums, rockets, bombs, and shouts, and we dreamed that the town was being captured by storm.

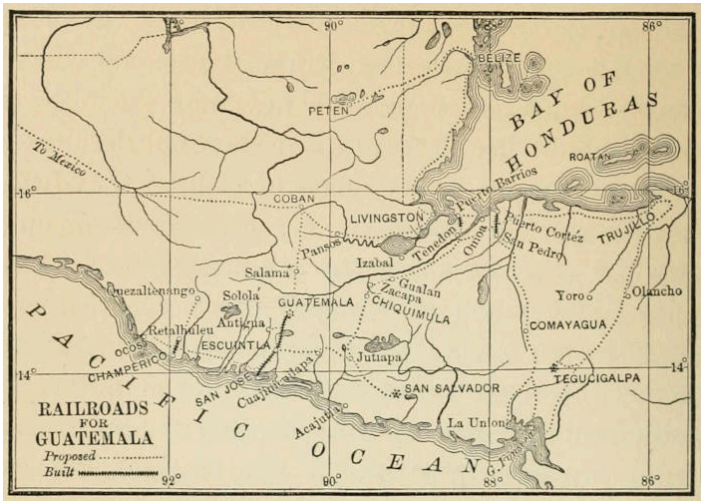
We had entered the region of railroads again; and our train started next morning at half-past six for San José, on the Pacific. The fare for the round trip was three dollars. We had a second-class carriage, as the only first-class carriage is reserved for the President. At the station, in the lowest part of the town, the height above sea-level is eleven hundred feet; and for the first three miles out the grade is rather steep. The remaining twenty-five miles offered no difficulties in road-building; but the culverts and bridges are fast decaying, and as they are not promptly repaired, the road is not safe. The run was made in two hours,—certainly not a high rate of speed. There were fine views of the volcanoes, and some interesting scenes at the stations. As we approached the coast the line crossed several shallow lagoons, and the country looked low and uninviting. I did not, however, see evidence of much ill-health among the natives, although the manners and customs were loose enough. The railroad (*ferro-carril*) ended in a respectable station in San José, at the head of a fine iron pier extending some six hundred feet into the sea,—beyond the surf, but not where vessels can come alongside.

We had seen the Pacific the day before as we rode from Antigua, and it was, as always, a welcome sight to me, for some of the pleasantest years of my life have been passed on its shores or on its islands. To-day its waves rolled up on the sand in so inviting a

way that as soon as we had found the hotel on the beach and ordered almuerzo, we returned to the pier, and, under its shelter, stripped and waded in. The rollers took us off our feet; and as large sharks were snuffing about just outside the iron piles of the pier, within a few yards of us, we had a sufficiently exciting bath. I have never seen such large sharks before, even in the shark-haunted shores of the Antilles or the Hawaiian Islands; but it is claimed that they dare not venture between the piles. The young sharks however have no such scruples; and we kicked several of the little fellows out of our way. The ironwork was thickly covered with barnacles and other crustaceans, and it took considerable skill to avoid being dashed against this.

On the pier-head there was a cool sea-breeze, and we spent much of our time there while waiting for the return train. A pier was built here in 1868; but a storm of unusual severity soon after destroyed it, and the present structure was built in a more substantial manner. The piles are of cast iron and hollow, fitted with auger-points, by which they are screwed down into the sand. The end of the wharf is covered by a shed, where are provided three steam hoisting-engines. As San José is, like most of the ports on the Pacific coast, merely an open roadstead, vessels do not care to wait long there, and stout lighters are provided to bring cargo between ship and pier. Even with lighters of some twenty-five tons, the task is not always easy, and many a passenger gets a wetting in jumping from the small boat to the iron cage used in rough weather to hoist the human freight to the pier-top. Since the completion of the railroad, in 1880, the tracks have been laid along the pier,—thus facilitating the handling of freight, much of which is lumber coming from the Oregon coast, and sugar,

coffee, and hides going to San Francisco. To-day two ships were at anchor, and a steamer was expected.

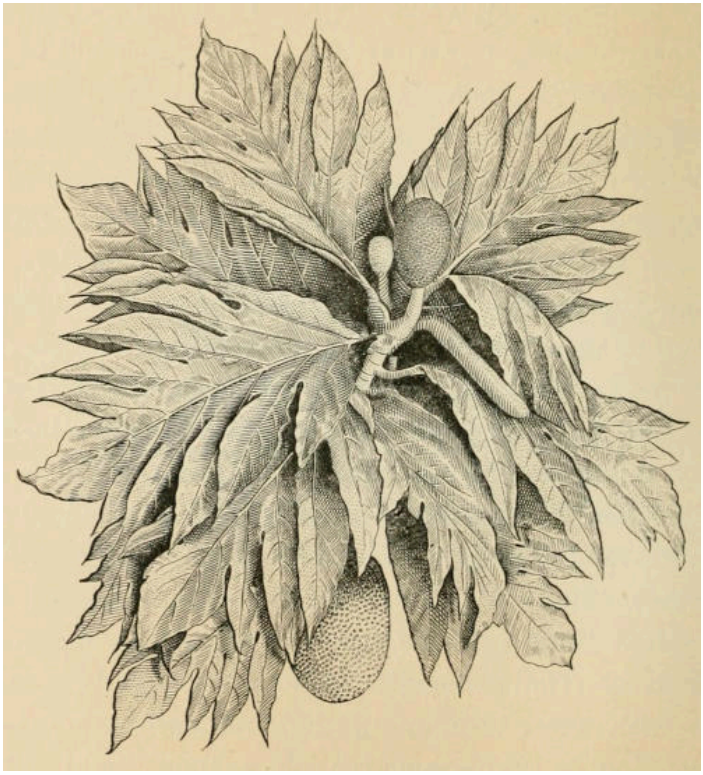


As we sat in the cool shade on the end of the pier, looking dreamily over the Pacific, I felt that the journey across the continent, as we had made it, was far pleasanter than when, in 1869, I had used the railroad,—then but a week old. We decided unanimously that the difference between the two oceans was not a matter of fancy merely. I had seen the middle Atlantic smooth as a mill-pond, and had been miserably seasick on the raging Pacific; so without going deeper into this question, our thoughts wandered from one thing to another, mine going back to the days when Istapa, the old port at our left hand, was more than a swamp, and when the Spanish shipyards there were humming with the busy workmen who had learned their craft on the Rio Tinto at Palos or on the sandy shores of Cadiz. Why had the place become so changed? My eye wandered up and down the coast for an answer to a suggestion that came to me. But only a rather steep

beach was there,—no cliff, not even a detached rock, to solve the problem of whether the coast was at the same level as in the seventeenth century; for this was the way I was trying to answer my own question. A rise of eight feet would explain everything about that deserted harbor; but there was nothing except the steep slope of the beach to indicate any change of level. Had I been able to see any rocks within the limit of two miles, I should have left the cool pier and trudged through the hot black sand to ask them. Frank's more practical mind was working in another direction; and he took up the conversation with a question whether a railroad to the Atlantic would change this port as well as the rest of the republic. Then we discussed the several schemes proposed for infusing a commercial spirit into this charmingly uncommercial country; and although we had not yet seen the route selected for the Northern Railroad, we had been over the track of several of the other paper railroads, and on our map—that inseparable companion—we sketched the roads. Here is the map we made, with several additions of a later date,—a map which shows fairly enough what can, and in time probably will, be done to open the country. First we discussed a road from Livingston to Coban, to open the coffee region; and as we were fresh from the very route, we tackled the problem unhesitatingly. The road, we decided, should run up the coast towards Cocali, turn through the forest six miles to Chocon, crossing the Chocon River on a single span, then over the smaller Rio Cienega and along the north shore of the Lago de Izabal, then a little to the northward of the Rio Polochic, bridging the Cahabon near the limestone ledges east of Pansos, thence through Teleman, and by nearly the cart-road route to Coban. Perhaps a hundred and

twenty-five or thirty miles, in all, of single track, would result in quadrupling the coffee export of Guatemala. It would then be profitable to raise more of the delicious oranges of Teleman,—oranges such as Florida can never raise; the mahogany of the Cienega and Chocon could be marketed; and all Alta Verapaz be a plantation of coffee and fruits. More than this, the road would pay from the first through train. Before us on the west coast was the sugar and cacao region,—that land that produces the royal chocolate which outside barbarians never get, but which might be raised very extensively from Soconusco eastward if a railroad should be built over the level lands from Escuintla to Retalhuleu and Ocós. A road from Guatemala City through Salamà to Coban would not only open the rich sugar estate of San Geronimo, but connect the capital with the Mexican system, which will probably go to Coban eventually. At Belize the English are trying to build a road inland to Peten to open the logwood and mahogany forests; and they need a road along the coast to open the settlements that now have no outlet save by water. A hundred and forty miles, at the outside, would connect Belize with Livingston. The roads in Honduras will extend between Trujillo and Puerto Barrios, there connecting with the Northern Railroad of Guatemala. Not one of these projected lines presents any very difficult engineering problems. The financial question is the only obstacle; and with the exception of the first two, —both coast roads, and of simple construction,— they would not pay for a few years; that is, until the plantations that would spring up along their way came into bearing,—that, however, in this climate, would not be long, even for india-rubber.

We had not finished our discussion of the railways when it was time for almuerzo; and we went to the hotel, where, besides a good meal and the largest plantains (thirteen inches long) I ever saw, there were a number of captive animals,—the most attractive being a bright little monkey who was very eager to open my watch.



Bread-fruit (Artocarpus incisa).

CHAPTER VI.
GUATEMALA CITY.

The run back to Escuintla took two hours and a half, and our comida was welcome at five o'clock. In the evening we strolled to the church,—an ancient building,—and found all the inside in confusion; the altar was hidden from profane eyes by a cotton curtain, while preparations were being made for the *fiesta* of December 8,—the Immaculate Conception. One of the attendants showed us with great pride a huge doll, representing the Virgin Mary, standing on a blue globe studded with silver stars. Beneath her feet was a *culebra grande*; and on twisting his tail the serpent's tongue was thrust out,—to the intense delight of the Indian devotees. The priest—if such were his dignity—wished us to examine the lace robes of the "Queen of Heaven," and to note particularly the decorations. As we returned to the hotel we heard a marimba, and soon met a religious procession, consisting mostly of women. In a small plaza we saw, covering a figure of the Virgin, a booth decorated with flowers and fruits,—especially long strings of *manzanillas*.[23] Before this image men and women (of respectable rank, we were assured) were dancing, disguised in horrible masks representing devils and animals.

Escuintla is the favorite watering-place of the capital, and its baths are certainly attractive,—especially to the Guatemalans, whose city is supplied with miserable water. The citizens, some five

thousand in number, are occupied in commerce and agriculture. In the near future Escuintla seems destined to become the railroad centre of the republic, as the lines from Puerto Barrios and from Ocós will meet there.

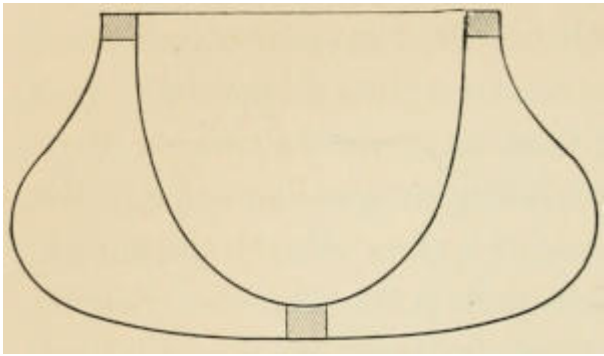
Early in the morning of the third day of our stay at this place we started out for one of the best bathing-places, on the way taking several photographs. At a bath-house we passed, the men bathing in the tank came out frequently through the wide-open door to talk with the women who were washing clothes in the brook outside. As these men were wholly naked, I wished to photograph this “custom” of the country; but when they saw the camera they modestly retired within and shut the door.

Our own bath, an open pool some fifty by a hundred feet, was of a depth increasing from three to eight feet. A high brick wall bounded one side, and we were told that beyond this was a bath for women. A shed in which to undress, and a tile platform on which to dry one’s self, was all the apparatus; but the water was cool and of a wonderful clearness, and we prolonged our swim. The fee was only a medio (five cents). In the season, which extends from December to March, doubtless the crowd is disagreeable; but we had the pool entirely to ourselves.

After almuerzo we started for Amatitlan; and a weary, dusty road it was, although the main road to the capital from the port. Frank’s mare seemed as though sunstruck, and sank down powerless by the road. Fortunately we were near a brook. We poured cool water on her head, and she soon recovered. We met great herds of cattle on their way from the dry uplands to the juicy pastures of the lowlands, and also stages full of miserable people, shaken and

dusty, and with the look one might fancy a soul in purgatory would assume,—always supposing it had a face.

The Falls of the Michatoya by the roadside relieved the monotony of the way, but were not so beautiful as I had expected from Stephens's account. We found the rails of the ferro-carril laid as far as Palin;[24] and it was graded beyond Amatitlan, on its way to Guatemala City, which it has since (1886) reached. Basaltic rock was abundant along the road, and so were beehives,—generally made from a hollow log and hung horizontally under the eaves of the houses. Honey, costing us a medio a quart, was very good; wax, however, is a more valuable product, as it plays a very important part in the service of religion, masses costing so many pounds of wax candles. The bees seem to be quite inoffensive, and the hives often hung close to the house-doors. Sugar estates were common in this district, the water-power being generally furnished by the Michatoya river. The chimneys of the *ingenios* did not indicate severe or frequent earthquakes here. Oranges, not of the finest quality, sold at three cents a dozen. Late in the afternoon we passed some cochineal plantations in a rather neglected state, and soon after entered Amatitlan, where we found a pretty little posada. Our mozos, who were fine fellows, were not far behind us. The barometer told us that we were 3,650 feet above San José.



Section of Boat at Amatitlan.

In the morning, finding sacate very dear, we made up our bestias' breakfast with maiz, and started betimes. We rode to the Lago de Amatitlan, which is very shallow, but clear near the shore. In the depths of this lake were thrown, according to tradition, immense treasures; and every now and then some ancient idol or bit of pottery is dragged up. On the banks were willows of considerable size; altogether, the whole scene was very different from anything we had found in the republic. The fishermen's boats were of a peculiar shape,—projecting below the water-line, so that a cross-section amidships would be like the diagram. In trying a short cut back to the main road, we were lost in a *cafétal*, and had to ask the people in charge to open a locked gate and let us out upon our road. We ascended seven hundred feet and found a good path. In various places there were deposits of fine pumice, much of which had been excavated, leaving caverns large enough to shelter many people from the weather. We entered the capital about noon, meeting Santiago on the outskirts, who conducted us to the Hotel del Globo. At this hotel, which was kept by a wretched German, we found our mozos, and the luggage we had sent

from Coban and Antigua, in perfect order.

We were now in the principal city of Central America,—a city well worthy of study; but not at all a representative one, for all that. After the earthquake of Santa Marta, in 1773, had ruined the beautiful city of Antigua Guatemala, the inhabitants sought a more stable site, farther from the slopes of the great volcanoes; and the valley of the Hermitage was selected, towards the north. Here was the half church, half fortress, that still interests the visitor; but all around was a sterile plain, and its elevation and distance from any port seemed most unfavorable to the growth of a large city. Eighty-four miles separate Guatemala City from its port of San José; while the Atlantic ports are more than a hundred leagues away, with no carriage-road between. In spite of these and other disadvantages, the city of Saint James has grown to be the largest and most important of Central America. It numbers among its churches some of the finest in the country; and its other public buildings are of imposing size, if devoid of any architectural merit. Almost all the houses are of one story; and the paved streets, laid out at right angles, and of nearly uniform width, do not attract the stranger as he rides over the exceedingly rough pavement. Indeed, our first impressions were very unfavorable; for had we not seen Coban, Quezaltenango, Sololà, and Antigua,—all of them much more beautiful than any part of Guatemala City? It was not until we were well out of the city that we were pleased with it,—not until it became a confused mass of white walls almost hidden in foliage, with the church-towers rising above, and in the distance those two noble volcanoes higher still, their heads well in the clouds. A city of sixty thousand inhabitants, with its houses extending six

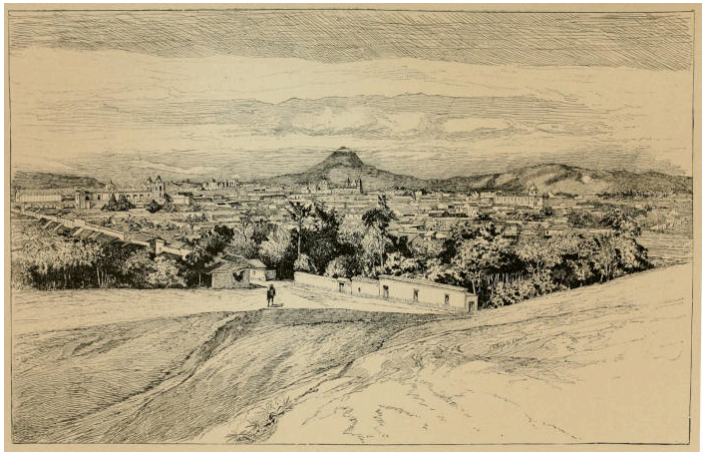
miles north and south, with a population of many nations and tribes,—mingling the sixteenth with the nineteenth century in many customs and business ways,—was not to be seen at a glance, was not to be understood even after a sojourn of a few days. We envied the faculty of our English cousins who can come to America, spend a few weeks,—even days,—and then go home and write with more knowledge of the places they have just glanced at than the inhabitants ever possessed.



STREET IN GUATEMALA CITY.

As we entered the city we passed at some distance the fort of San José; and it was significant that the guns all pointed towards the city it was supposed to protect. Taking no interest in military matters, which I am constrained to believe are undesirable if not unnecessary relics of a barbarous age, I did not go any nearer to see whether, as in the case of San Felipe, the guns were more deadly to those within than those outside the fort; but the walls looked queer, and we were assured that they were of adobe,

painted to imitate stone blocks,—a kind of Quaker wall.

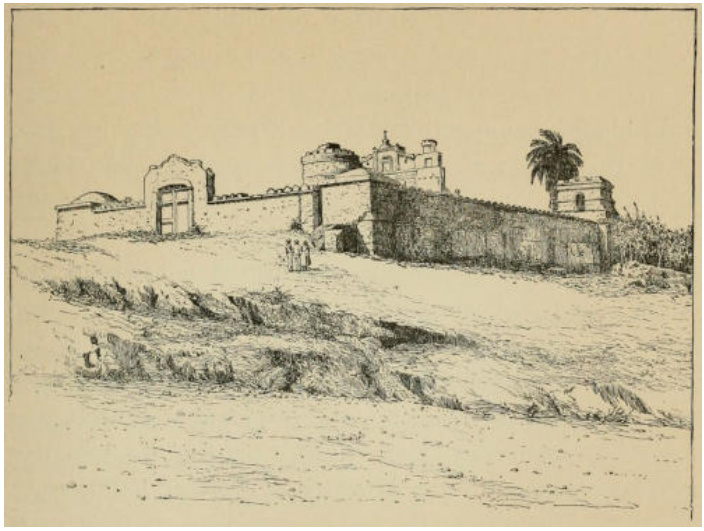


GUATEMALA CITY FROM CARMEN.

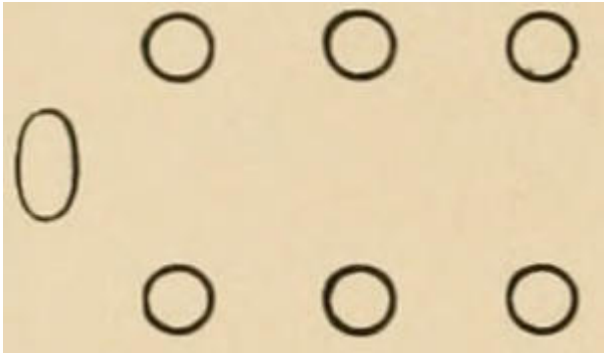
Although the Plaza is always the principal focus of a Spanish town, no street ever leads directly to it, all lead by it, as if accidentally; and so we found ourselves in the public square of Guatemala before we had been an hour in the city. It was simply a square taken from the tiresome rectangles of the city; and only on one side had it any sufficiently imposing boundaries. The Government had suppressed the priestly power; but its monument still towered above the very insignificant buildings used as Government offices. This metropolitan cathedral is about two hundred and seventy-five feet long, with some architectural pretensions, but belittled by its front towers, which were added a few years ago. The colossal statues of the four Evangelists which guard the platform in front detract from the effect of a good façade. The interior is plain. In a vault beneath the church repose the remains of Rafael Carrera, the former President of the republic. On the evening of

the seventh of December the whole front was illuminated with small lamps in honor of the Immaculate Conception. Within was a large doll dressed to represent the Virgin Mary, "*sanctissima, purissima, caramba!—carissima*," as we heard a young heathen exclaim. She stood on a blue ball spangled with stars, and trod the *culebra grande* as at Escuintla. All the choir-boys wore scarlet robes. It seemed as though the attendants rather hustled the gauze angels, which trod on snakes in imitation of Madonna. The other churches were numerous, and the more imposing date from the days of the Spanish domination, when all good things, including plenty of money, were in priestly hands. Perhaps the most curious of all the churches is that one on the Cerro del Carmen which antedates the city. Santiago carried my camera out to the distant hill, from which I not only brought away a picture of the church, but also chose that position for a view of the city, after patiently waiting for the clouds to roll away from the volcanoes of Fuego and Agua. The church itself seems more a fortress than a temple of the Prince of Peace. The heavy gates stood ajar, and we entered the courtyard of two centuries agone. In the midst stood a round tower, seemingly solid, and decorated by a fillet carved with cherubim in low relief. Within the dark church all was still and deserted; only the graves beneath the pavement of tombstones were tenanted. A curtain hung before the image at the altar, and a carefully written notice requested the visitor not to uncover the Virgin without permission of the sacristan. In the bell-tower hung a bell with the date 1748,—twenty-eight years before the city was built within its sound, when the heavy, awkward burden must have been brought with so much difficulty into this lonely valley. Two others, with the

painfully modern date of 1872, hung by its side.



Church of the Carmen.



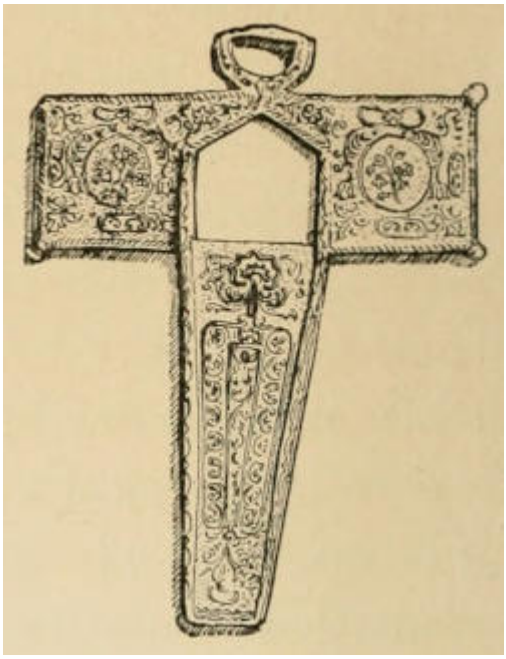
We wasted the whole morning in a futile attempt to call on the President. His house was a large one-story building at the corner of the Plaza, not distinguishable from its surroundings except by the guard of soldiers at the gateway to its interior courtyard. The corporal in charge refused to take my card in, telling several falsehoods as to the

whereabouts of the President his master; but at last a superior officer arrived, who at once ordered the fellow to take the card, and we were soon ushered, without further ceremony, into the bedroom of the Chief of the State. It is the custom in this country to arrange the chairs in a reception-room on either side of a sofa and at right angles to it; and the host is expected to sit on the sofa and entertain his guests on either hand. President Barrios occupied this place of honor when I entered; but as we conversed he moved about until we sat side by side. He had not forgotten our interview at Totonicapan, and was affable, seeming to understand our wishes perfectly. He said we should have all we asked for, and called an officer to conduct us to the Department of the Interior, where Señor Lainfiesta, the Secretario de Estado en el Despacho de Fomento, also promised to expedite our business. Some days later, while discussing the resources of Guatemala with the Minister of Foreign Relations, I spoke incidentally of the bad arrangement of the Guatemalan exhibit at Boston in the International Exhibition of 1883; whereupon the minister asked me to accompany him to the President and acquaint him with the matter. We went at once,—simply across the street; and it was gratifying to see the stupid soldiers and the insolent corporal jump up and salute the cabinet officer as we passed in unannounced. The President's room was full of disorder,—articles of daily use, with books, guitars, newspapers, all mixed together. In the courtyard was a fine bull and several sheep, just imported. I felt that Señor Barrios greatly improved on acquaintance, and his bright, quick eye was decidedly intelligent. He was not tall, but stout, with an air of military stiffness which wore off slowly. In our conversation I asked him to refer me to any

printed accounts of his personal history; but he smiled and said, “That, señor, has never been written.” Alas for the progress of the country! that life was soon to end by violence, in an attempt to restore the confederation of the republics,—a scheme very dear to this energetic man, who in ten years did more for the internal prosperity of his own republic than has been effected by all the governments of Central America in fifty years!

There is in Guatemala but one theatre, and to that we went on a Saturday night. The building, a general imitation of the Église de la Madeleine in Paris, stands in the centre of a plaza of considerable size laid out as a public garden.[25] The Government subsidy of $25,000 to $40,000 permits the employment of good artists for five or six months in the year; and we saw a company fresh from Madrid play “La Mujer del Vengador.” The ballet was tolerable,—the males far surpassing the females in skill and agility. The tickets are kept by the visitor, the coupon being taken at the entrance. The auditorium was lighted by gasoline sufficiently, but the decoration was plain, and not attractive. The parquette was occupied almost exclusively by gentlemen, who gazed serenely at the ladies in the boxes which surround this, and were gazed upon in turn in a way that would scandalize even a Boston audience. The wife of the President, a lady of great personal beauty, was pointed out to us; and we were assured that it was not improper to stare at her, even with glasses. In all such places the audience always claims quite as much of my attention as the stage; and among the boxes I noticed an elderly lady of decidedly American appearance, and I fancied she might be the distinguished Madame Susannah Peñol, to whom I had letters. A few days later, as I was

ushered into her reception-room, I saw at once that I was not mistaken; for on the wall was a capital portrait of the lady I had seen.



Spanish Stirrup.

Our hotel proved a most wretched one; the comida was poor in quality and insufficient in quantity. A ballet-dancer and her pet dog took most of the best bits as the various dishes were passed among the company. Our host proved much the same sort as we had met at Quiché; and we were compelled to move to the Gran Hotel, which we found very comfortable.



Terra-cotta Figurines.

On Sunday the correct course is to see a cock-fight in the forenoon, a bull-fight in the afternoon, and to go to church and wash up in the evening. We varied the programme, and in the morning visited the Chief of Police, Colonel Pratt (formerly of New York), from whom we learned many points of interest in the municipal regulation of this city. The Cemeterio, or Campo Santo, next claimed our attention, where we found catacombs partly underground and lighted by a clerestory. Several very showy monuments have been erected since the prohibition of burial within

the churches, though but few of them are in good taste. A far pleasanter visit was to the “Bola de Oro” baths, near the Teatro Nacional, where we had two good bath-rooms, with douche and plunge, all for four reals. The water in the city is not good, and in the baths its turbid character was disagreeable. The pressure on the mains is regulated by water-towers, usually built into the house; and not being sufficient to supply a douche, the water for this purpose has to be pumped into an elevated cistern. From the bath we went to an exhibition of native products and industries in the building of the Instituto Nacional. The exhibition was a good one, and some of the products—as chocolate, rice, sugar, and wax—were of exceedingly high quality. More interesting to me was the Instituto itself. Originally a monastery, the Government confiscated it when the religious orders were suppressed, and President Barrios established in the vacant halls a college which would be creditable to any country. We went through the recitation-rooms, the physical laboratory, the dormitories,—where the iron bedsteads looked neat and comfortable,—into the printing-room; thence through the garden to the menagerie, where were many good specimens of native beasts and birds. We next visited the meteorological observatory, the faculty room, where hung a dismal painting of some poor Indios being torn to pieces by dogs at the command of the Conquistadores, and finally the museum, where, together with stuffed animals and birds, a series of specimens of native woods (labelled only with native names), minerals, ores, and the rest, we found a choice collection of antiquities. Here on the walls were the dress-swords of Alvarado and Cortez, and strange stirrups, of wrought iron of great size and weight, that the Conquistadores had brought

from Spain.[26] In the cases were grotesque incense-burners that my friend E. Rockstroh had brought from the country of the Lacandones; idols from various places, a lava mask from Copan (figured on page 200), figurines in terra-cotta with tails and tigre-heads, stone figures with turbans,—all on a subsequent morning made their impression on my plates. But an incense-burner of red clay found in the Lago de Amatitlan failed to excite the delicate film, so dark was the room and so refractory the color; the form was most complicated, quite rivalling in this respect those ancient Japanese bronzes used for the same purpose. In the library are many valuable manuscripts, mostly unpublished, but of interest to the historian and antiquarian.

Almost worn out with sight-seeing, we stopped at a restaurant near by, and with our lunch had some native *cerveza negra*,—an unpleasant beer brewed from molasses. We had lost the cock-fight; but there was to be a bull-fight in the afternoon, to which we were strangely attracted, and we purchased seats under the roof at three reals, walking over to the Plaza de Toros at four o'clock. There was a fair audience—perhaps six or seven thousand—in the immense circular building or enclosure. As an overture we had an exhibition-drill. The soldiers wore red jackets, blue trousers, and white caps and cross-belts. The evolutions were well done to the bugle-notes, and the whole performance was to me much like a ballet,—simply a complicated series of preconcerted movements of the human body.

A horseman clad in black, mounted on a superb white horse, then rode across the ring and formally asked leave of the Chief of the Corrida to open the games. The Chief tossed him a roll of colored paper,

which he carried to the Amador del Toro and then backed gracefully out of the enclosure. Then came the Espada, Manuel Aguilar of Seville, with three Banderilleros and as many Picadores, followed by horses, mules, and mozos. There were only five "bulls," of which three were oxen,—and they might all have been, for any fight they showed. The Picadores did their work, and the Primero Espada did some excellent dodging; but this did not satisfy us, so bloodthirsty had we become. At first we wanted to have a horse killed, and at last nothing short of the death of a man would satisfy us. But we were not to see anything of the kind; and after the bulls had trotted about the Plaza until half-past five, the show was over, and the unsatisfied audience dispersed. What would a Roman audience have done in the Flavian amphitheatre, had their wild-beast propensities been thus excited and disappointed? So far as the City of Guatemala is concerned, the bull-fight is growing unfashionable, and even with the populace such uninteresting shows cannot long attract. The Guatemaltecans should import some of the fashionable "Cribb Clubs" of our Northern cities, if they still wish to see human blood flow. At present there is more brutality in the sparring exhibitions of Boston than in the bull-fights of the Central American city.

Our day was not yet ended; and as we crossed the Plaza in the evening, on returning from a call on a friend, we found the pavement crowded with people and dotted with little fires, over which various Indios were cooking doughnuts, fritters, and chocolate. The fritters were eaten with plenty of honey, and were very palatable.

Another night we had an opportunity to see one of

the religious processions so common in former days, —afterwards prohibited by law, but now occasionally allowed, as there is little danger of a renewal of the priestly power, and these spectacles please the priests, women, and children. This particular one, which we attended in part, was in honor of "Nuestra Señora de Guadeloupe." A huge doll, all lace and tinsel, was carried through the streets with music, flowers, and fireworks. It was a miracle that the image was not set on fire,—especially when the "toro," all blazing with squibs and Roman candles, ran through the crowd; but no accident befell, so far as I knew. I am somewhat confused as to the person the image represented, but was told that she was visiting the holy lady (*santissima señora*) who lived in the church to which the procession marched. On arriving at the door the visitor was obliged to tip over and go in head first in a horizontal position. It was no doubt all right, but it seemed so utterly undignified that we did not care to go into the church and see how she got up again.

At the hippodrome in the plain of Yocotenango, to which the horse-cars run from the grand Plaza, horse-races are held in May, August, and November, at which times prizes are offered by the Government and the Sociedad Zoótecnica.

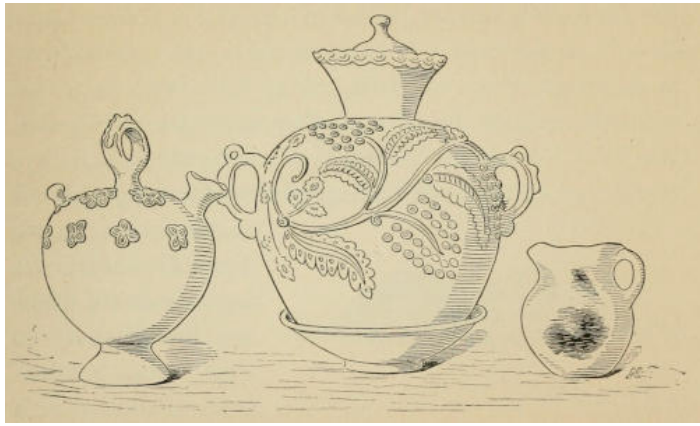
It was interesting to see how the State had occupied the buildings of the banished or suppressed communities. In the Franciscan convent was the Revenue and Customs Bureau; the Post-Office occupied the church and convent of the Third Order (of St. Francis); the Treasury and Telegraphs divide the fine house formerly the home of the suppressed Sociedad Económica; and the Bureau of Liquors and Tobacco holds the splendid building of the

Dominican friars. Other of the confiscated edifices are used as schools, and are most admirably suited to the purpose. There are eight elementary schools for boys, and ten for girls; two finishing schools or academies for each sex; six night-schools for artisans and others; and two asylums, which collect in the morning the young children of poor parents, instruct and feed them, and return them at night to their homes. There are two establishments for secondary instruction, one for each sex, directed by foreign professors and well installed; one is the Instituto Nacional, already mentioned. All these institutions are supported by the Government, much of the system being due to the enlightened policy of General Barrios. Provided for special instruction, and also supported in the same way, are the Technical School (Escuela de Artes y Oficios), well provided with laboratories and steam-power; the Agricultural College, with fields near the city for practical work; a Business School, with night sessions for clerks; a Law School, Medical School (Medicina y Farmacia), Normal School, Polytechnic Institute, and School of Design; besides many schools supported by private means.

Benevolent institutions, too, are not wanting,—among them the Asylum for Orphans and Invalids; the Central Hospital, where four hundred patients are cared for daily; and the Military Hospital in the suburbs. The Penitentiary seems to be well conducted, and the House of Correction has extensive workshops, in which good work is done. No less than twenty public fountains and washing-places adorn and keep the city clean.

All business is not conducted in the shops, which are small, and seldom make much display; but there

are two markets, one of which, the Nacional, is very extensive, and seems to contain within its bounds merchandise of every sort,—in one place pottery, in another fruit; saddlery and cloths, confectionery and hardware, bread and guns, are close at hand. The prices are high, even of the necessaries of life; and the cheapest things were pottery and nets, both of Indian manufacture. It was not a little amusing to remember that the great retail stores of Boston were imitating the variety-shops of this uncommercial city, and collecting within their walls all kinds of goods,—from shoes to hats, from dinner-sets to carpets, from stoves to books. The country variety-stores of New England are outdone in both cases. As almost everywhere else, it is expected that the purchaser will try to beat down the price. Among the curiosities of the market we found native jackets (*guepiles*) made in the simplest manner, but embroidered with the greatest labor and most barbaric fancy of color and form. These the women take great pride in; and the showy garments cloak many deficiencies in the rest of the wardrobe.



Indian Pottery.

CHAPTER VII.
GUATEMALA TO ESQUIPULAS.



Pacaya, Fuego, Agua.

Early one morning Frank and I rode out of the city and up hill to an elevation of twelve hundred feet, passing the aqueduct and getting several fine views of the capital,—better in some respects than the view from the Cerro del Carmen; for now the two volcanoes were clear. As the road was excellent, and our animals were in thorough trim, we both got more enjoyment in the saddle than from almost any other mode of sight-seeing. We were leaving the volcanoes of Antigua; but Pacaya was before us, and we had entered a distinctly volcanic region. We passed several small villages, in one of which we breakfasted on honey and tortillas. Cerro Redondo is a small hamlet of perhaps a thousand inhabitants, whose chief occupation is coffee-culture. The “round hill” which gives the name is a small, very regular volcanic cone,—one of a number less regular extending towards the Pacific coast. Here in the road-cut were black volcanic sands and plenty of vesicular lava. As the daylight waned, we met men, women, and children coming from their day’s work

in the cafétal, and a contented, happy company they were. We did not arrive at the chief town of the Department of Santa Rosa, Cuajinicuilapa,—or Cuilapa, as it is often abbreviated,—until nine o'clock. Here we found a wretched posada, where we shared our room with an enormous cockroach an inch wide and two and three quarter inches long. Although we had a letter to the Jefe from the Department of State, we did not care to wait in the morning for him to get up; so after climbing into the church-tower and over the roof, we rode on to the fine old bridge over the Rio de los Esclavos. This, consisting of ten masonry arches spanning a rocky ravine, bears the dates 1592-1852. Our path followed the valley for some time, and at a convenient place we had a bath in the rapid river, whose waters were agreeably cool. As we left the river our path led up a very steep ascent nearly eighteen hundred feet. On the way we had several fine views of the "Hunapu" volcanoes,—Pacaya, Fuego, Agua, and Acatenango,—clustered together, and in the clear atmosphere seeming to be close at hand. Pacaya seemed to have the largest crater, while Agua had none visible from this side. On the top of this "ladder" we rested our animals on a grassy plain where they could pasture. We had noticed cotton-trees (*Bombax*) on the way up, and we found some wild pines that the men repairing the road had left, and we tracked the fruit, which is pleasantly acid, to the pines used here for hedging (*Bromelia Pinguin*). The curious umbrella-ants (*Œcodoma*) were common on the path, each carrying its bit of leaf wherewith to stock the formicarium. A puff of the breath would overset these heavy sail-bearers, which go in Indian file. We had no time to follow them home on this occasion;[27] for when we

came to Azacualpa, still some eight leagues from Jutiapa, we found this large village (twelve hundred inhabitants) had no posada. Indeed, it had nothing but corn and beans, and even water was scarce; so we pushed on into the night through an unknown country. After dark we could buy no maiz for our bestias, though a señora sold us a bottle of excellent honey. We had seen from the hill above, in the fading light, a magnificent valley of great extent, broken by ridges and ravines, and we had hoped to find some decent shelter. But when the moon rose over a volcano, we decided to camp; and picketing our steeds on a fine pasture, we slept on our blankets, undisturbed except by the wind, which was strong at times. Our barometer told us we were 3,152 feet above the sea. I noticed that in the highlands it was apt to be windy at night.



Hunapu from the East.

In the morning our honey, a little bread, and some unripe oranges gave us a very unsubstantial meal; nevertheless at daybreak we saddled and rode on. We saw many pigeons, little gray quails that ran along the path, and crows. At La Paz we found a very neat house, where we stopped for almuerzo; but alas for external signs! my bowl of black-bean soup contained a patriarchal cockroach. It was pleasant to see through the open door our animals eating a good breakfast of *sacaton*. A little farther on was a clear stream; but most of the way was over a dusty plain among *espina blancas*[28] (*Acacia*) and calabash-trees,

lava streams and blocks. The surface of the ground was cracking open with dry shrinkage, and there was little to interest us. Our Yankee nature asserted itself, and we whittled at some of the little purple-spotted calabashes as we rode along. The rind is very hard, even in young fruit; and the inside is solid and consistent as an unripe squash. The odd-looking, speckled blossoms spring from the trunk of the crabbed-looking tree (*Crescentia cujete*).

About noon we came to Jutiapa, situated on a plain through which the Rio Salado has cut a deep valley. We entered by a gateway and found the Plaza. This was paved, and in the midst a dribbling fountain indicated a very insufficient water-supply for the town. Before us was the church, behind us the Casa Nacional, and the other sides were occupied by stores and the house of the Jefe. Our anxious inquiries for a posada were met with the too frequent answer that there was no such thing here in this town of some twelve hundred inhabitants. Good fortune directed us to inquire of a person in a shop at a corner just beyond the church; and this resulted in a most hospitable invitation to the house of Señor Alonzo Rozales, a Spanish gentleman whose name will be always a charm to conjure by. He gave us a large room opening to the street as well as into the patio, and we at once felt at home. We had walked many miles, I leading, Frank driving, the poor tired animals. It was fifteen leagues from Cuilapa to Jutiapa, and the road was very hard and maiz very scarce. We were obliged to wait here for our mozos, whom we had sent from Guatemala but had not overtaken on the road; and we were happy enough that the necessary delay came in so comfortable a place. Our host brought us new mats for our bedsteads, and pillows trimmed with lace in Spanish

style; then, after killing a very large and crusty scorpion which had established himself over the door, presented us with a bottle of Val de Peña,—a fine red wine from Spain,—and left us to our rest.

Sunday morning came, but no signs of our mozos. The church was closed, as there was no resident padre; we got in, however, while an attendant opened it to do some work on the bells. The roof was apparently arranged for a fortification. Within we saw the skull of an Indio (?) built into the stucco over the *agua bendita*, and a painting representing a padre offering the consecrated wafer to a kneeling ass,—apparently in the office of the communion, as the padre holds the chalice in his other hand. A figure in the background—perhaps the owner of the ass—has long mustachios, wears a turban, and holds up his hands in astonishment. No explanation of this curious subject could be obtained there; and after rejecting Balaam and his ass, we concluded that this was the ass on which Christ rode to Jerusalem. As volcanoes are baptized into the Church, why not asses?

There was a worn-out, poverty-stricken appearance to the town; not a cultivated plant to be seen, as all the vegetables and fruits are grown at some distance, in the more fertile mountain valleys. Some of the larger houses, indeed, have a few flowers in their patio; but these are quite invisible from the street. No fruit was in the shops or for sale in the streets, and our animals were fed on squashes. Perhaps at the annual fair (November 15) this ancient town, which under the name of Xutiapan existed long before the Conquest, may assume a livelier appearance. Still anxious about our mozos, we walked back several miles on our road, though

the high wind made travelling very disagreeable. At last, in the afternoon, Santiago arrived with the mozo we had hired in Guatemala; and to our astonishment the latter brought with him his wife and little daughter. This was more of a caravan than we had bargained for, and I was puzzled; but the woman seemed quiet and inoffensive, and the child, who could hardly walk, and was carried always on her mother's back, was a good little thing, indeed, the most reasonable child I ever saw. I acquiesced in the arrangement the more readily because I saw that the woman was unwilling to have her husband go away so far from home that he might not return to her. He was a handsome, strong fellow, and proved well worth all the woman's care.

On Monday we started our mozos and luggage at six in the morning, and left our kind host before seven. We were almost surrounded by small volcanic cones, but Suchitan was the only one we identified. This gave little signs of its fiery origin to unpractised eyes, for the lower slopes were covered with shrubs, and here and there a little house peeped out among the trees, while fields extended to the cloudy summit. So severe was the wind on the plain at the base of this volcano that our animals several times turned from the path to seek shelter. Three leagues out we passed Achuapa, and five leagues farther Horcones,—both small villages. Clematis grew over the bushes and softened the rough appearance of the calabash-trees and espina blancas,—almost the only vegetation on this dry and unpromising upland. We had frequently seen the ocean from our highway during the past few days, and now we saw the volcanoes of Salvador, one of which was smoking, which I supposed to be Izalco. Blocks of lava were scattered all over the plain, as if some bed of lava

had been broken up and brought down in fragments by an avalanche. The stone was well suited for the manufacture of metatles, or tortilla-stones, and fragments were scattered all about, as well as several half-finished metatles, spoiled by an unlucky blow. We could not find any one at work, and did not learn with what tools this rather difficult stone-cutting is accomplished. The honey of Suchitan is very good, perhaps made partly from acacia-flowers; its flavor being not unlike that of the famous honey of Auvergne in France,—also, a region of extinct volcanoes.

We arrived at Santa Catarina about three in the afternoon; there, while our animals rested and fed in front of the cabildo, we bespoke a comida at a little cook-shop in the Plaza, and then explored the poor little church, which was dark, windowless, and wholly bespattered with bat-filth,—pictures, crucifix and all. We beat a hasty retreat from this unseemly sanctuary; and after a wash in the public fountain, returned to the *cocina*, where we were served with tortillas, fried eggs, plantains, frijoles, and coffee,—for which we paid three reals, or thirty-seven and a half cents. As we left the town we passed a noisy *trapiche*, or sugar-mill, consisting of three vertical wooden rollers turned by four oxen. It sounded very like one of the ancient cider-mills in New England. A good mill could make a fair percentage of sugar out of the crushed cane passing through these rollers.

From the town we found a rather steep descent, and at the bottom a large river to ford, whose bed was full of loose rocks,—making the passage very difficult. We had not gone two leagues from Santa Catarina before darkness came on, and we camped by the roadside. A cheery fire and our blankets made

the camp very comfortable, and the little child was quiet all night,—not civilized enough, Frank declared, to cry instead of sleep. The dew-fall was very heavy; it is probably always so at this dry season.

We were up at light, and sent the men to find water while we got the fire burning and made coffee. With honey and wheaten rolls we breakfasted well,—indeed, our out-door life in this good climate made us feel at peace with all men, and satisfied—nay, pleased—with everything that befell us. The morning was cloudy; but we knew the clouds did not mean rain at this season, and we were in the saddle before the dew was quite dried from our blankets. As we went along we several times passed black obsidian chips, some recent, but most of them quite old,—evidently the refuse of the knife-makers, whose work in ancient times was much in demand; the long, slim blades used in circumcision were never used but once, then consecrated in the temples or broken; and those knives used for other purposes were of course brittle, and soon destroyed.



Mozo on the Road.

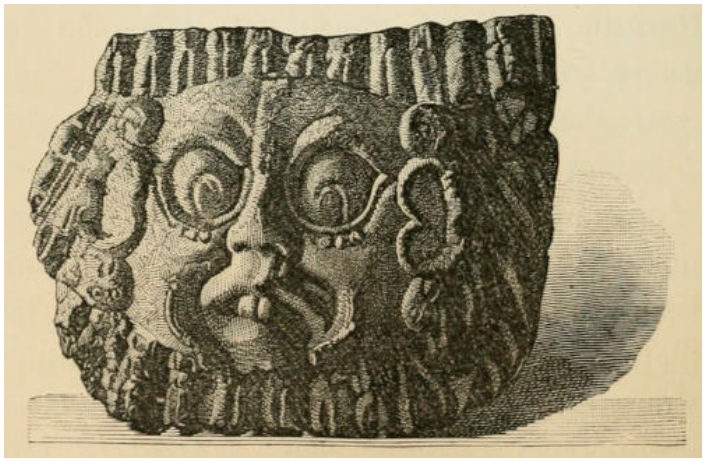
We arrived at Agua Blanca about eight o'clock, and stopped to feed our bestias on cornstalks and squashes. The former were kept high up in the trees, which neither cows nor pigs could climb, while the squashes in endless variety nearly filled a small house, through whose bambu walls the wandering

hogs could smell the coveted food. The town is appropriately named “White Water,” for the only supply was very milky in appearance and very clayey in taste. Almost directly over the town, the volcano of Monte Rico, long extinct, is the most striking feature in the landscape. Cultivated to the very edge of the crater, which is said to contain a large lake, the fertility of the fields was greatest at the top,—due, no doubt, to the waters of the crater; while the lower slopes are comparatively dry and barren. Around the base are many smaller cones, which remind one of those which dot the slopes of Ætna and give the Sicilian volcano the name “Mother of Mountains.” Not a league beyond we crossed the only clear stream we saw all day; but even this water was not very pleasing to the taste. Bars across the road made us fear we had missed the path and were no longer in the “camino real;” we were, nevertheless. At Piedras Gordas, in the afternoon, we stopped for food, in hopes of hearing tidings of our guide and mozos, who had started before us. Our frugal meal of plantains, tortillas, and red bananas was constantly interrupted by the pigs who were stealing the sacaton from our hungry animals. For miles there were booths and stone fireplaces marking the camps of the pilgrims who journey to the sacred Sanctuario de Esquipulas. At six o’clock we camped in a fine pine-forest high up in the mountains. No human habitation was near, but a few cattle were seen here and there. The pasturage was good between the scattered trees of this grand park. We built a roaring fire, which cast curious shadows from the trees, pegged our bestias securely, enjoyed a good *lomilomi*, or Hawaiian massage, and both fell asleep. Suddenly I awoke with the strong impression that something was wrong. There was no noise, not

even the cry of a night-bird; only the soft sough of the night-breezes in the pine-tops. Frank was breathing quietly at my side, the fire was out, and the night was cold outside the blankets. As I sat up to look about, a dark object caught my eye in the dim distance, and without much thought or reason I went towards it, simply because I felt impelled to do so. There was no consideration of personal danger, but an overpowering feeling that all was not as it should be. The first thought as I got near the black object, which seemed to move towards me, was amusing,—it looked like the devil; there were the short, straight horns, the hoofs, and I saw the switch of a tail. It was very like a dream. I had seen the "father of lies" in many a human form, but never so undisguised; and I was filled with curiosity. The next moment a joyful hinny discovered our mare Mabel, who recognized me before I could plainly see her. Putting my arm around her neck, I found the remnant of the horse-hair lariat with which Frank had fastened her. I tried to return to camp, more than an eighth of a mile away, but could not orient myself in the dark, and had to call to Frank. Guided by his answer, I retraced my steps, stumbling into a brook I had unconsciously crossed in going out; and we found the peg and again secured Mabel. In this curious way we were saved a long hunt for the next day.

At daylight we were on a very good road, and soon after eight we stopped at a sugar-plantation for some coffee and frijoles negras. Here was a fine stream, together with vats formerly used for indigo-making, now useless. Hill rose above hill, and Esquipulas seemed as far away as ever. By the roadside were the pilgrim fireplaces, frequent and extensive, and we noticed a large deposit of a pink-colored rock, which I supposed might contain manganese (*Rhodonite*).

The specimens I brought away, I regret to say, were afterwards left at one of our camps. The last hill at length climbed, before us lay an extensive valley reaching to the distant mountains of Merendon, the boundary of Spanish Honduras.



Lava Mask in the Museo Nacional.

CHAPTER VIII.
ESQUIPULAS AND QUIRIGUA.

I have grouped in this chapter two most interesting monuments of the past,—a Christian temple whose mission seems to have been fulfilled, and a pagan graveyard where stand the monuments of unknown kings or heroes. They are not inaptly joined; for in this busy, matter-of-fact, commercial age, it is well that the less perishable records of our brothers who have preceded us in the unending march of life upon this globe should detain us, if but for a moment, with the lessons they may teach to thoughtful minds,—the temple raised lay pious labor to signify that there is more than the present to live for, the monuments of the dead to carry on the personalities so soon lost in earthly life.

We gazed from the precipice at the white building, large even on so vast a plain, and began the steep descent. The little village was almost dead in appearance. There were many houses and rooms to let, but no posada; and as our mozos had not arrived, we rode to the Santuario down the single street of the town. It was wide, paved with cobbles, and bordered on either side by the booths and lodging-sheds for the merchants and devotees who still crowd the town at the festival season. Two streams, one the headwaters of the Rio Lempa, flowed across the road beneath solid masonry bridges. Into two of the posts of one of these were inserted two ancient sculptures, said to have been brought from Peten, but more probably from the neighboring ruins of Copan,

just beyond the mountains. One was the grotesque head of a griffin, the other a small human figure with a preposterous head-dress. The Santuario is an imposing structure, massive rather than elegant, and dazzling in its whiteness. Towers rise at the four corners, divided into four stages, of which the lower one is broken only by a small oval window on the side; the second is pierced by an arched window and decorated with pilasters; the third, still square, rises above the general roof with two windows on each side; the fourth, octagonal in shape, has a single window on the alternate sides. A large dome rises in the midst, figures of saints and a clock mark the façade, and the whole structure rises from an extensive platform surrounded by an iron fence with masonry posts, and approached by a broad and easy flight of steps.



SANTUARIO AT ESQUIPULAS.

On entering, the first thing noticed was the immense thickness of the walls, ten or twelve feet at least,—a reminder that this is an earthquake country. The floor was paved with large red tiles, needing

repairs in places. Among the pictures was one of the Last Supper, and near it a decidedly local one of people lassoing Christ. We had hardly glanced about, when a curious figure presented himself, speaking tolerable English very rapidly, and, after the usual interchange of compliments, introduced himself as Dr. José Fabregos y Pares, a traveller; and then presented his companion, the handsome young cura, Padre Gabriel Dávila, who welcomed us to his church and showed us the curiosities of the place. First, of course, we wanted to see the famous black Christ, “Our Lord of Esquipulas.” This miraculous image, to whose shrine devout pilgrims have gathered even from distant Mexico and Panama,—pilgrims numbered in former years as many as fifty thousand at a single festival,—was made in Guatemala City in 1594 by Quirio Cataño, a Portuguese, at the order of Bishop Cristobal de Morales, on the petition of the pueblo of Esquipulas. The sculptor was paid “cien tostones,”—a testoon being of the value of four reals, or half a dollar; and to meet this expense the Indios planted cotton on the very land where the sanctuary now stands. For more than a century and a half the image stood in the village church, where the miracles wrought spread its fame very far. The first archbishop of Guatemala, Pedro Pardo de Figueroa, laid the foundation of the present temple, which he did not live to finish, but died Feb. 2, 1751, praying with his last breath that his bones might rest at the feet of this image of his Lord. In 1759 Señor D. Alonso de Arcos y Moreno, President of the Real Audiencia of Guatemala, completed the great work, at a cost, it is said, of three million dollars; and on January 6 of that year the image was translated with all the pomp of the Romish Church. Twelve days later, the remains of

the pious archbishop followed. The founder established a brotherhood of worthy people who should take upon themselves the material support of the edifice; but Padre Miguel Muñoz, writing in 1827, says that this laudable custom had died out among the whites, only the Indios holding to the compact. Those of Totonicapan furnish a certain amount of wax and provide for some offices of the Church; those of Mexico visit the shrine in Holy Week with offerings of wax; while from Salvador are brought wax, incense, balsam, oil, and brooms.

Now, with all this we expected to see something remarkable, but saw only an ordinary altar-piece, with plain curtains before the miraculous image. It was not a holy-service time, consequently the curtains could not be raised; the padre, however, after sending Frank's revolver out of the holy place, took us behind the altar and admitted us to a small glass room where the black image stands. It was much less than life size, very black,—painted, however, only by time,—inferior in conception and execution, and wearing long female hair. Ex-voto pictures and gold and silver images and tokens hung upon and around this figure, and in the same chamber were figures of Joseph and Mary, together with angels with cotton-wool wings. It was impossible for me to feel any of the awe with which past generations of Indios have regarded this black Christ. My imagination is not wholly dulled, and I have felt curious sensations before the horrible idols of the Pacific islanders, before the placid features of a gigantic Buddha, in the Hall of Gods at Canton, and before the Jove of the Vatican. I have been in the holy places of many nations, and have felt a sympathy with the worshippers; even the black cliffs of the supposed Sinai have led my thoughts captive.

But here in Esquipulas there was nothing but the husk,—nothing solemn, nothing holy; the portrait of Figueroa was the most respectable thing in the church. It was, moreover, no strange thing to pass into the vestry and overhaul the boxes of gold and silver ex-votos; these we could purchase at so much an ounce. They were indeed, as our new friend Dr. José declared, "very curibus." All parts of the human body, healthy or diseased, many animals, and other objects of human desire or solicitude, were to be found here. To our matter-of-fact Northerners it may be necessary to explain the theory and object of these works of native *platerías*. Medical men and surgeons are almost unknown in the remote regions of Central America, and a sick or injured man, while applying all known remedies, sends also to the nearest *platero*, or silversmith (common enough among the aborigines), and has a model of the affected part made; this token some friend, if the patient be unable to make the journey himself, carries to the mysterious image, whose power to heal he devoutly believes in. It is a faith, rather than a mind, cure. The barren woman in the northern climes, instead of being bowed down with her sad lot, obtains an easy consolation in a pug or lap-dog; but her Indian sister takes a truer view of the purpose of her life, and in her prayerful longing devotes in effigy the coveted offspring,—much as Hannah, the wife of Elkanah, devoted the unbegotten Samuel to the Lord. Like the Hebrew barren wife, the Indian goes up on a pilgrimage to the most sacred shrine, makes her offering, and breathes her prayer. The Eli of the Sanctuary bids her "go in peace."

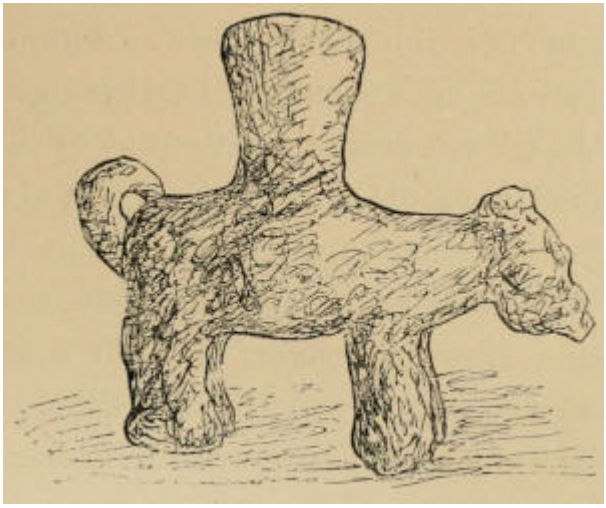
The accumulated offerings of gold and silver images are sold to pay the charges of the Templo,—not always, however; for report has it that the

Government some years ago seized fifty thousand dollars' worth of this treasure and appropriated it to its own use.

Dr. José invited us to share his room, which we gladly did. He had just returned from Honduras, and was on his way to an Indian city in Guatemala where was buried, to his certain information, an immense treasure of the ancient kings. I will not tell my readers the exact locality, though I fear Don José will find no treasures greater than the beautiful opals he brought from beyond the Merendon Mountains. As we left the Templo I bought oranges of a little girl, giving her the price she asked,—ten for a cuartillo (three cents); and I almost believed in the miracle-working image when the girl brought me three more oranges! I ought to have insisted on having twenty for a cuartillo. Very late in the afternoon the mozos arrived, having been lost in the Cerros, where we strangers had found a plain path without guides. There was not enough daylight left to give us a photograph of the image, but we got the white Santuario. Even at the present day the annual festival, extending from the sixth to the ninth of January, brings together many people,—but perhaps quite as much for trade as for worship.

As we rode out of the town in the morning we passed men repairing the aqueduct,—which reminds me that the water in Esquipulas is very bad. We climbed an unbroken hill eighteen hundred feet to an altitude of forty-six hundred, glancing back for a last look at the great white temple, monarch of the plain. As we crossed the divide, we had a fine view of Quezaltepeque, with Monte Rico and Suchitan looking in the distance much more volcanic than when we passed them on the road. Hard as the

ascent was, the descent was even worse; twenty-one hundred feet of exceedingly bad road delayed us greatly, and it was long after noon when we arrived at Quezaltepeque. There was not much to see here. In the dirty church I noticed a picture of the “Virgen de Lourdes,” and a contribution-box for offerings to that modern shrine; and Frank found a very curious incense-burner, which certainly did not give evidence that the second commandment had been broken. As we stayed only an hour for our almuerzo and comida combined, we did not see much besides the Plaza and the main street; we followed the latter out of the town, fording a stream of some size, with gravelly bed and bordered with fruit-trees.



Incense-burner.

We were now in the picturesque valley of the Hondo,—a winding, clear, and generally rapid stream; our path sometimes crossed it, and again was high above it on the cliffs. We passed through San Jacinto about dusk and camped a few miles beyond,

having to go a long way after dark, as both sides of the road were fenced, a most unusual thing. We at last stopped at a very unsuitable place, kindled a fire which guided Santiago to our camp, and then decided to have our mozo and his family with us for an early start in the morning. Frank took his revolver and went back nearly two miles, where he found the Indio sound asleep in a house. Father, mother, and child were quickly routed out, and when they came up we comforted them with some hot coffee. Towards morning it rained, but not through our blankets; and before the morning mist had risen quite above the hills around us, I had my camera at work. The daylight showed what a queer bedchamber we had chosen. Acacia-brambles were thick enough, and there was no level ground; while behind us was a high limestone cliff closely resembling a columnar basaltic formation, and just across the road a precipitous descent to the river. We sent the mozos on at six o'clock, and followed soon after. At Santa Elena we saw many fan-palms, cultivated as material for hats. At Vado Hondo we could resist the tempting river no longer, but had a delightful swim in the clear, cool water. All the valley was beautiful, and generally cultivated,—here with sugar, there with corn, and we saw several small sugar-mills.

As we approached the lower valley the sun broke through the clouds and was very hot; but when we came to the wide gravel bed of the sometimes broad river above which Chiquimula stands, the heat was most unbearable. On a plateau to the right stood the ruins of an immense church, while far away to the left stretched a fertile valley. We rode up hill into the town at eleven o'clock, and, as usual, found no posada. We did, however, find good food and a very

comfortable room at the large mercantile house of Señora Anacleta Nufio de Monasterio (this was the mark on her china). The house was large, and in the patio were orange-trees and a fountain of good water. The important matter of lodgings settled, we went to church, finding it out of repair and dingy. To put ourselves in thorough moral order, I decided to offer here at this ecclesiastical centre two tallow candles,—a penance we wished to perform at Quezaltepeque, but could find no candles for sale near at hand. I placed the candles, lighted, in silver candlesticks, which were empty on the grand altar, and sat down on the doorstep to see what would happen. Soon an attendant came and asked if I had offered the candles; and on being assured that I had, exclaimed “Buen!” in a very satisfied tone; nevertheless he took the poor candles from their place of honor and put them before an empty saint-case. Well, the saints above were perhaps as well satisfied; but Frank here below was rather indignant, and declared he would never offer a candle again. But what else could we expect for making light of the candles?

We called on the Jefe, Don Ezequel Palma, a military man past middle age, who was very polite and who sent his private secretary, Dr. Domingo Estrada, to show us the lions of Chiquimula. We rode first to the ruins of the ancient town where we had seen the remains of the church in the morning. The same earthquake that in 1773 destroyed Antigua shattered this town and caused the removal of the inhabitants some distance to the westward. The old site was a better one; but the people moved away to save the trouble of clearing up the ruins. The church was two hundred and fifty feet long, and seventy-five wide. The immense walls, ten feet thick, were still

standing; but the vaulted roof blocked the interior with its fragments. The ruins of this once holy place were now used as a cemetery, the rank in this world of the occupier determining the distance of each grave from the altar-end; while outside were the neglected ashes of the commoners. The brambles and thorny plants made the locality unpleasant for living beings, and we got our horses away as soon as possible.

We passed the new hospital, which Dr. Estrada showed us with pride; it will be, if ever completed, the best in Guatemala. A visit to a sugar-estate in the valley showed us fields of red cane, small, but very sweet. There were two small mills, both made in Buffalo, N. Y.,—one turned by wind, the other by oxen; and the product is about nine hundred pounds of brown sugar a day.

At five the next morning we were serenaded by the military band of the town,—an honor we had received several times before; and the music was very good. We left the ancient town of Chiquimula at eight o'clock, although our hostess, Señora Anacleta, wished us to stay and join an expedition of her friends to Copan to examine "las ruinas,"—an excursion we longed to make, but could not then.

The road to Zacapa was good, and we saw many gigantic cylindrical cacti. These curious trees looked pulpy and fragile; but Frank tried a branch with his raw-hide lasso, and the horse could not pull it off! We shall never again lasso a prickly cactus. On trees by the road (chiefly euphorbiaceous trees) were large nests, eighteen to twenty inches long, of some mud-wasp. As we approached Zacapa we crossed the Hondo by a ford where the water was not two feet deep; but the path was very long and winding, and

the current rapid. As usual, there was no posada; but a call on the Jefe, Don Brígido Castañeda, resulted in a page being sent to conduct us to the decent house of a widow, where we found lodging and comida. Our first search was for a blacksmith, our animals needing re-shoeing. There were three *herreras* in the town; but one was sick, another had no charcoal, while the third had no nails,—and there was no lending among these sons of Thor. So Frank had to do the work himself with hammer and axe; and his general handiness again stood us in stead. There was little enough to attract us in this town, and early the next morning (Sunday) we sent the mozos ahead and followed before the weekly drill of the militia was finished. In Zacapa the Government has a large tobacco-factory; and the "Zacapa puros" are much liked by smokers.

All the way out of town the fields were dry, although we passed several small streams, and beyond San Pablo a grove of fan-palms watered by a fine brook. No fruit was anywhere to be seen, not even on the great cacti. The Motagua River we had looked for at every turn, and at last we came upon a stream so rapid that it does not even water its dry banks. A swim was out of the question, but our bath was very refreshing.

At Zacapa we left the volcanic region; and afterwards we saw no more lava or tufa, but a formation resembling old red sandstone, mica schist, slates, milk-quartz, and some serpentine. We were then in the metamorphic mountain-belt. The shapes of the hills of course changed with their geological nature, and we missed the beautiful cones that had formed a characteristic of our daily landscape since we had our first glimpse of Tajumulco from the

Chixoy valley many weeks before.

On this road we saw the Palo Cortez,—one of the most splendid flowering-trees I ever saw. It was large, leafless, and covered with dark-pink flowers. Never in large numbers, it brightened the dark forests with its mass of rich color, and as many as five or six would be in sight at once. Surely we could have made a calendar marked by some remarkable plant each day; and this Sunday was a red-letter day, marked by this tree named in honor of the great Conquistador. A fine arborescent composite, with dark-orange blossoms of the size and shape of thistles, closely recalled the Hesperomannia that my dear friend Horace Mann (the younger) discovered during our explorations in the Hawaiian Islands, twenty years before.

In the afternoon we passed the rancho of Don Cayetano, where we saw good cattle, but did not stop until some distance beyond, when we boiled our coffee by the roadside and I photographed our travelling arrangements. Although we arrived at Gualan at half-past five, we had more than the usual trouble in finding a lodging; but at last a deaf old man, who was also burdened with a large goitre, took us into his comfortable house of two rooms, while Santiago, who professed to be familiar with the place, took our animals in charge. The town was insignificant and decayed, although on the main road from Guatemala City to the coast. After a supper of the toughest meat we had found in this republic, our host gave us his daughter's room; and while Frank attempted to make the little bed comfortable, I slung my hammock from the dusty rafters. The daughter, about sixteen, was rather pretty, and we were sorry to incommode her; but she turned in with the old

man, and we could hear that they were both asleep long before we got used to the squeaking noise of a lizard in the thatch and to the showers of dust every motion of my hammock shook down from above.

We were at the head of navigation on the Motagua, and decided to send our mozos on to Los Amates by land, while we took a canoa. Santiago had promised us one in the morning, but could not find it; whereupon Frank found a boatman, and reduced his price from $4.00 to $2.50. Just as we were returning to the house to get our luggage, we met our useless Santiago with a man who had kindly consented, as an especial favor to him, to take us for $6.00. In going to the river we passed the Calvario, which was elaborately walled; but the roots of many shrubs were prying the masonry open. A descent of about two hundred feet brought us to the river bank, and we found the water cool and good.

Our canoa was a good “dugout,” with a mat of split bambu for our seat, and our boatman managed it very skilfully, avoiding the frequent shoals and taking full advantage of the current. Bathers and washerwomen were common along the banks,—the latter with precious little clothing, but usually working under a palm-leaf shelter. Often they did not hear the paddle, so noisy were their tongues, until we were close upon them; and they generally ducked when they saw us. White herons, alligators, and iguanas were common enough, and we saw two very round turtles about a foot in diameter. Twice we touched bottom in the rapids; but the skill of the paddler kept us bows on and saved us a wetting.

At Barbasco the river was wide, and we saw three mules crossing, as our bestias would have to do later in the day. They waded two thirds of the distance

and swam the rest, one being carried by the current into the bushes down stream.[29] The exhilarating motion was in marked contrast to our struggle up the Rio Polochic; but there was no such interest in the valley of the Rio Motagua as in that of the Polochic, and not until we approached Los Amates did we come to the forest. In many places banana or plantain suckers had got entangled in the bushes overhanging the banks or on shoals, and were rooting and growing. The river is about a hundred yards wide at Los Amates, where we landed after a canoa voyage of five hours and a half. The steep bank was muddy, and the whole town likewise, as far as we could see. Four open-walled reed huts shelter all the inhabitants, both man and beast. The view riverwards was attractive, as the river seemed the only way out of this forest-environed spot. We walked into the woods on the trail northward to El Mico, about three quarters of a league; here the ground was utterly water-soaked, and we saw nothing interesting except two humming-birds having a bitter duel. They were so absorbed in their deadly hatred that we stood some minutes within arm's length without interrupting them. Near the houses the manàca-palms overspread the path in most perfect Gothic arches, forming groined vaults of living green. Our comida was tolerable; but flies and mosquitoes were abundant, so were dogs and pigs, and there were many chickens with their wings turned inside out and their feathers put on the wrong way. We could throw stones at the dogs without attracting notice; but I found the people evidently did not like to have the pigs insulted.

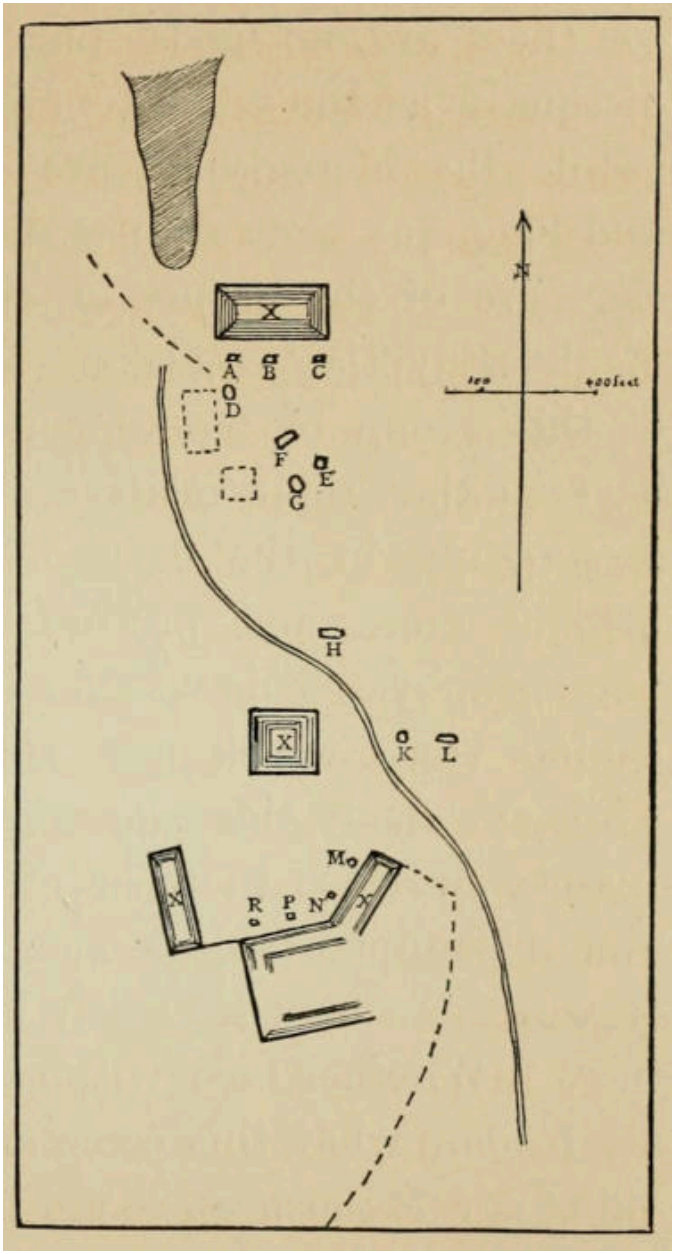
Our señora was a curious specimen, all skin and bones, clad in a scant dress, a large straw hat, and apparently nothing else, and smoking an ever-

burning cigar. At night she put us on a shelf of slim bambus that would not bear our weight standing, though they made a fairly comfortable bed. We shared this loft with corn and poultry; and looking down into the common room beneath us, we saw by the light of a bowl of oil strange domestic scenes. Women were swinging in hammocks and smoking cigars, and children lying naked on the bare earth floor; and it was pleasant to see such at-one-ness and the utter absence of anything like bashfulness.

Our calendar alone informed us that the next day was Christmas, and we spent it in waiting for our mozos and bestias, who arrived about three o'clock. We sat on the sheet-iron pipes, fifteen inches in diameter, which were resting here on their way to the Friedmann mines, farther south. They kept us out of the mud, and were the only comfortable seats in the town. On the mango and orange trees we found a pretty little yellow orchid (*Oncidium*?). In the houses we saw tanning done, without a vat, by making a bag of the hide and filling it with the bark decoction, which slowly percolated through and was replaced. The remains of an English steam-launch were scattered about, sheets of copper from her bottom serving as clapboards to part of the house where we lodged. At night the men of the place were all drunk and very noisy. The fires were kept burning late, and cast weird gleams through the open slat walls into the darkness.

Having engaged a guide for the so-called Ruinas at Quirigua, at eight o'clock the next morning we said our adios (after paying our hostess nineteen reals for ourselves and mozos) and started down the river bank. Across the river were the largest bambus we had seen in the country, some joints at least six

inches in diameter. Our path led through a canebrake, and often so close on the loose banks of the Motagua that I feared we should drop in. For two hours we went on in this way, stopping only to rifle a turtle's nest of fourteen small eggs (less in size than a pullet's). We then turned to the left and came to the Quirigua river,—which more resembled a creek; and here my heart sank, for I have a great dread of black waters and muddy bottoms. Santiago waded in first, and I followed close on the little mule; and we all crossed safely, our mozo leading his wife by the hand with great care. Once in the thick forest, our guide did his best to empty a generous bottle of aguardiente he had brought with him; so that within an hour he knew very little about the road, or anything else useful. Cohune and similar palms were on all sides, and we first saw here the *pacaya* (*Euterpe edulis*?),—a slender palm with edible pods or buds. Enormous trees with buttresses even the goyava took this form here—were prominent among the lower palms, and ginger and wild bananas bordered the rather indefinite path, which we had constantly to clear of vejucos and fallen palm-leaves. Many round holes, as large as a flour-barrel, showed where palm-stumps had been eaten out by insects.



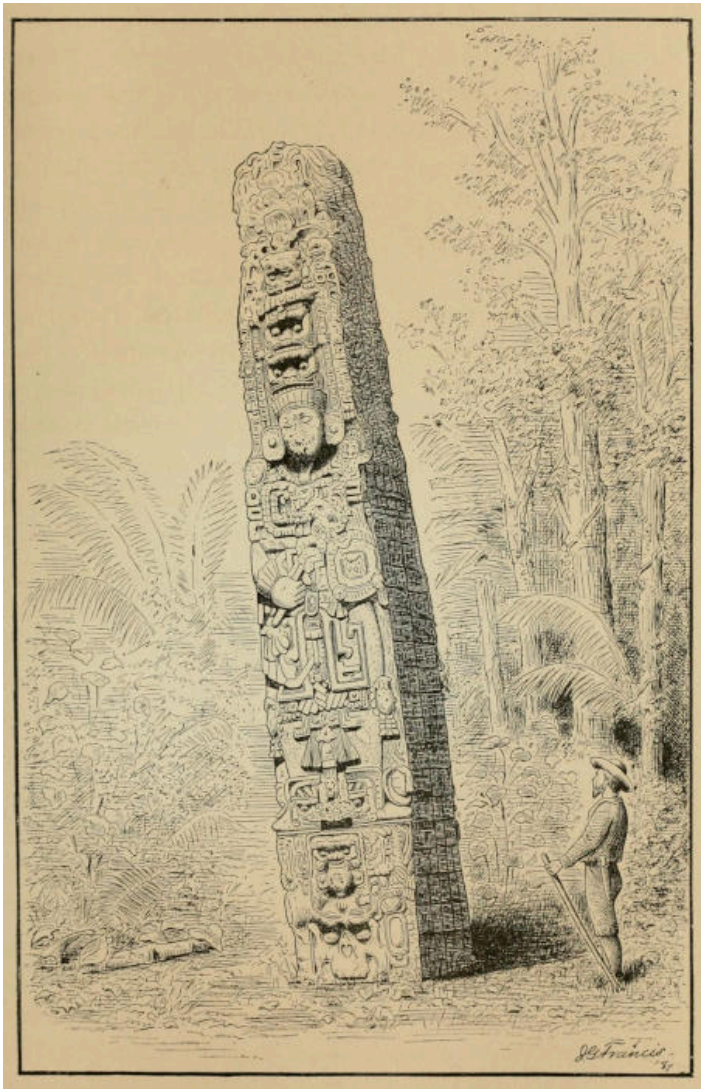
Remains at Quirigua.

A little brook with chalybeate waters cost us both a wetting; for Frank's mare stuck in a mud-hole, and my mule slid down a steep bank backwards into the water, soaking my saddlebags. After travelling three hours on this muddy road, we came to a clearing, where were two large champas fast going to ruin. Mr. A. P. Maudslay, an Englishman who has spent much labor and money in exploring Guatemaltecan antiquities, had been here twice, and not only cleared a considerable space around the principal monuments, but had cleaned the stones, and even made moulds in plaster of some of them; he had also built the champas that sheltered us. We spread our wet things over a fire, and went to the first monument (A on the plan), which was close at hand. Mr. Catherwood's sketches, published in Stephens's most interesting Travels, led us to expect rough menhirs quite analogous to the Standing Stones of Stennis, or those better known of Stonehenge. Here, rising from a pool of water collected in the excavation Mr. Maudslay had made to examine the foundation, was a monolith of light-colored, coarse-grained sandstone, well carved over its entire surface except top and bottom. On the front and back were full-length human figures, not deities, but attempted likenesses, joined with the tigre's head to indicate chieftainship, and a skull to represent death. Both sides were covered with hieroglyphic inscriptions quite distinct, but not intelligible to any living being. (See Frontispiece.) What would I have given to be permitted to read the stone-cut story! No locked chamber ever inspired half the curiosity. When was this stone set up, by whom, and to what purpose? Whose are the portraits, when did these persons live, and what did they do for their fellows. The mocking answer to all these questions is cut in the stone

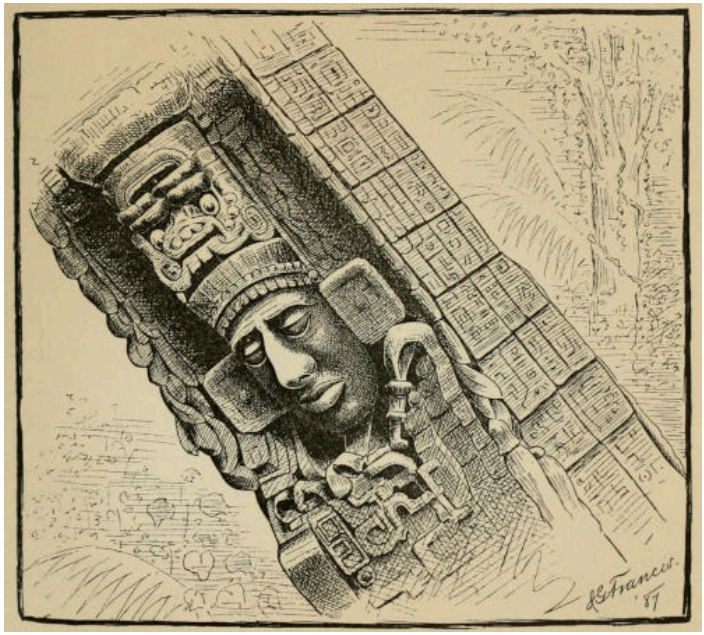
before us. The native name of *idolos* is an idle one, unless used in the Greek sense; for these are no gods, but memorials of the dead as distinctly as the tombstones in our modern graveyards. While the hieroglyphs are similar to those at Copan and Palenque, they are not, I think, identical, and I fancy they are of the nature of the denominative cartouches of the Egyptian obelisks. I copy Mr. Maudslay's plan of this group of monuments, from which it will at once be seen that their relative position to the other remains is puzzling in the extreme. We left our imaginings for the time, and proceeded to the practical work of photography. This was no light task; for the sun was behind trees which cast shadows on the monuments, while the shady side was almost invisible in the camera. Insects swarmed in front of the lens, and the heat was almost insupportable under the rubber focusing-cloth. However, I succeeded fairly in carrying away a dozen pictures. Whether I can with no greater difficulty explain to my readers what this cemetery looked like, even with the aid of Mr. Maudslay's rough plan, is more questionable.

We entered a clearing, some four hundred feet square, made only the year before, but already covered with undergrowth, so that our men had to use their machetes freely to expose the stones. The level was low and the soil full of water, which stood in pools here and there. On our left was a mound, more than two hundred feet long, which we did not inspect, and in front of this were placed three monoliths. The first (A) was the smallest; the second (B) was four feet wide, three feet deep, and perhaps sixteen feet high; the third (C) was four feet nine inches wide, two feet nine inches deep, and eighteen feet high. Both B and C stood on irregular ends, and

the tops of all were left much as they came from the quarry. Two taller ones stood on the opposite side of the clearing. One (F) was inclined (as it was to a much less extent when Mr. Catherwood made his drawing, forty years ago), and the under side has been protected from the weather, so that the face is well preserved, the large nose being intact. This face, unlike the one on the opposite side, is below the general level of the sculptures, suggesting a substitution of the present portrait for the original one. The inclination is about thirty-six degrees from the vertical; and as the stone is about twenty-five feet above ground, it must be wedged with large foundation-stones, or be buried deep in the soft earth.



MONOLITH AT QUIRIGUA, E.



Monolith at Quirigua, F.

Of all the portraits cut upon these stones, this leaning monolith has the most remarkable. The hands and feet are represented in the same conventional manner as on the stone marked E; but the immense size of the nose, as well as of the ears, distinguishes it from all others. The cast of countenance is very Egyptian. On many of these sculptures are seen indications of the worship of the cross (as in the figure on the reverse of E), although this symbol is usually of complicated form, as on the celebrated tablet at Palenque. The monolith B has on the breast, in place of the cross, the double triangle, sometimes called Solomon's Seal, and, like the cross, a well-known symbol of primitive worship. The nose of the figure on what is now the upper side of F, is broken, but was of large size originally.

There were several curious features in the decorative or symbolic work on the monument marked E on the plan. The plumes above the head are very extensive, and there are two distinct heads of the tigre, superimposed with two well-modelled hands extending from the union. The face is much injured. The ears are enormous, and beneath the chin is a projection reminding one of the “beard-case” of the ancient Egyptians. One arm, with ruffled sleeve, holds an instrument much like a “jumping-jack,” or else a human body impaled, while the other is concealed beneath a richly ornamented target. The feet are turned out, and on them rest what closely resemble felt hats with plumes, while the pedestal (part of the one stone) on which the figure stands, bears the death’s-head surmounted by a small head with the remarkable ears of the chief figure. On the reverse the features of the figure are better preserved. A diadem is distinct under a large and very realistic jaguar-head, the ears are covered by strap-like ornaments, the sandals elaborately wrought, and the hat-like ornaments much more distinct than on the other side. The costume is more elaborate, although not cut in so high relief.



Monolith. E (back).

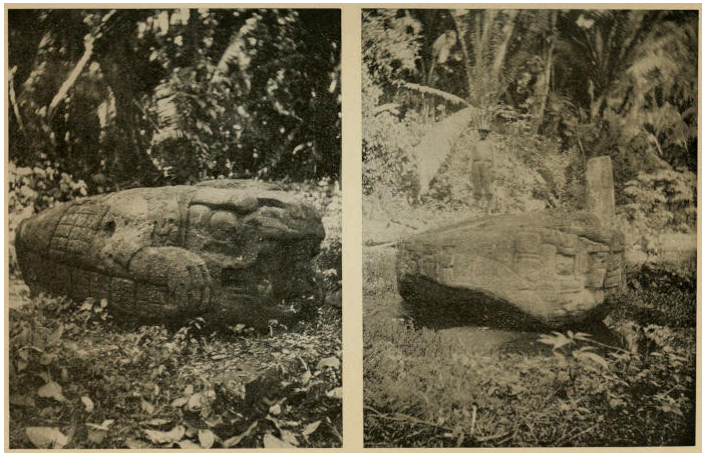
Two large bowlder-like masses (D and G) of the same stone are placed unsymmetrically in relation to the other monoliths, and rest on separate cross-stones. They are carved all over with figures and inscriptions, G being fashioned at one end into the head and claws of some monster. A decidedly Aryan

head, with mustache and flowing beard, is carved in high relief on the other.[30] If these were altars, they must have been very inconvenient ones, as they are about five feet high, and very little of the upper surface is level. We did not visit the other portions of the cemetery as shown on the plan, because we did not at the time know of their existence, our guide being still under the malign influence of the bottle.

We boiled our turtle's eggs (these, by the way, no boiling ever hardens), drank coffee and limonade, and ate sardines among these Maya relics, and then departed, after an interesting visit of only three hours. The heat and the swarms of insects by day gave us no encouragement to pass the night there, though we could not leave without a hope that we might return, and perhaps dig about the stones. Although visitors do not often get to these monuments, some have left the proofs of their low sense of propriety in inscriptions scratched on the stone. Truly the Indios who wander through this cemetery and call the figures *idolos* are more civilized than those fellows who have desecrated the stones by their otherwise unimportant names.

Our way out was a return for two miles, and then branched into another path, where the marks of the railway surveyors were plainly visible, and it seems that the Ferro-carril del Norte will come close to the Ruinas of Quirigua. As we left the lowlands we came upon ledges of sandstone perhaps a mile from the Ruinas, of the same kind used for the monoliths; but we could not find, perhaps owing to the dense vegetation, any signs of quarry work. In the path we saw fragments of pottery apparently ancient; and there are no modern habitations near at hand. As the path wound up the hill we crossed a sandstone ridge

and had fine views over the valley of the Motagua. It was pleasant to get among the pines again, and on solid dry ground: I think I dread mud more than any other impediment in the road. When we struck the "camino real" late in the afternoon, Santiago went to the little village of Quirigua to get the traps he had left there, while Frank and I went on to the hacienda of Señor Rascon, late Jefe of Izabal, whom we had met in the office of Secretario Sanchez in the City of Guatemala. This hacienda was a mud-house with poor accommodations and little food; but as it cost us only two reals, we had no reason to grumble. The old señora in charge had only one egg; but overcome by Frank's plaintive appeal, she scrambled under the bed where the hens were roosting, and managed to coax another from one of them. We were here entertained by the process of branding cattle,—not an attractive exhibition of brute force and brute suffering.



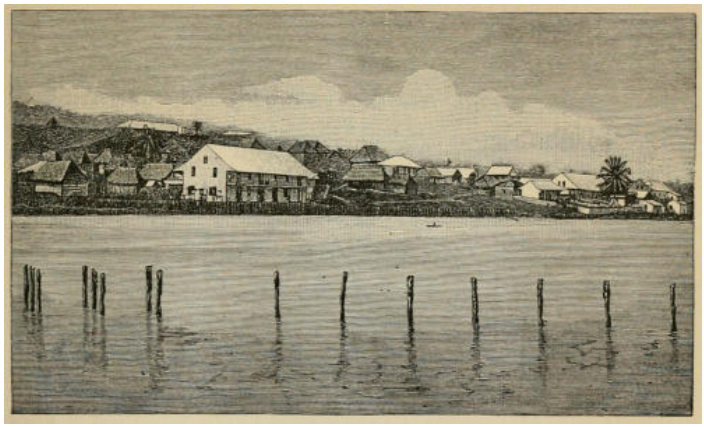
STONES AT QUIRIGUA.

We were in the saddle at seven, expecting a hard day's journey. The road was bad enough, muddy

even when steep. In places it was paved; but this was worse still. The flowers were interesting, and the splendid butterflies were flitting all the way. A fine passion-flower which Frank gathered for me, and a cypress-vine (*Ipomœa*), were among the old friends in a new place. Several trains of pack-mules on their way to Guatemala City passed us, and we had to use care to avoid being bruised by their loads, which they did not hesitate to push into us if not driven aside. As Mabel had cast a shoe, Frank walked almost all the way, using the mare occasionally as a bridge when the stream to be forded was wide. As we came out on the northern slope of El Mico we had an attractive view of the Lago de Izabal, and later of the town itself, where we arrived early in the afternoon, finding quarters in the posada of Señora Juana, an ancient mulattress. Her house, at the extreme east end of the town, was large and ruinous; but we had a comfortable and cool room and a very decent comida. In the garden the señora had roses, gardenias, caladiums, hibiscus, and the Mexican vine (*Antigonon leptopus*). The town, with its white houses, low level, and ditched streets, reminded us of Belize; but while the capital of British Honduras is alive, Izabal is dead. On the hill westward was a fort, with lighthouse and town-bell. At 5 and 6 A.M., and at 6, 8, and 9 P.M., the fort made a noise. The wharf at the custom-house was long, but had only two feet of water, so shallow is the lake at this side. The shore was sandy, and the water clear. The principal streets are lighted by *gaz* (kerosene); and as the ditches on either side are worse than the gutters in New Orleans, this is a necessary precaution.

In the photograph of Izabal, taken from the end of the dilapidated wharf, the fort is seen on the hill above the large warehouse; at the right is the cluster

of buildings belonging to Mr. Potts,—a gentleman who has a fine collection of native orchids in his garden, the only one in all the republic who seemed to take much interest in horticulture. The church is just behind this dwelling, and on the hill at the extreme right of the view is the Campo Santo. In the foreground the corroded piles show well the action of wood-destroying animals in the tropical fresh waters.



Izabal.

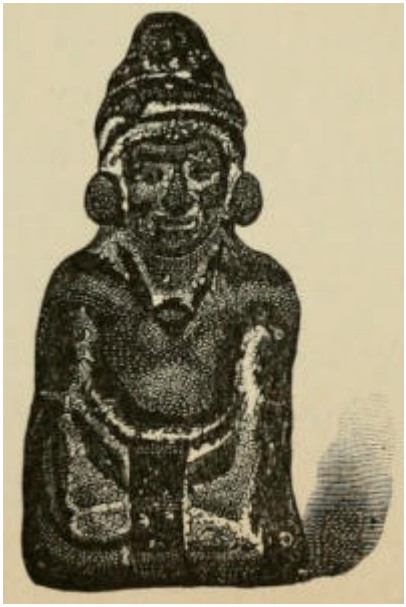
We saw also in Izabal a very interesting collection of antiquities from the mines of Las Quebradas, on the Motagua. There were clay heads of curious workmanship, obsidian and flint knives, arrow and spear heads; but what attracted me most were three small whistles of terra-cotta. They represented human figures in a squatting position, all with *maxtlis*, or waist-cloths, about the loins, and a coif, or turban, on the heads. One little fat fellow reminded me of the Chinese roly-poly mandarins, and was of light-colored clay. Another, who also had a paunch of generous proportions, presented the profile of an Egyptian sphinx. But the third, which was four and a

quarter inches high and of a dark bronze color, bore a close resemblance to a North American Indian. The figure had earrings precisely like those copper ones that Professor Putnam discovered in the Ohio mounds. This whistle could be made to sound three notes, the mouthpiece being at the posterior base. I tried to buy these interesting relics, which were found buried at a considerable depth, but the owner would not part with them; and as the whole collection is kept in a basket and often handled, I suppose the photographs I took will soon be all that is left of them. Clay whistles modelled in grotesque form, which also sound three notes, may be found to-day in the plazas for sale; but the material and workmanship of these ancient terra-cottas surpasses any of the work of modern Indios.

During the night we were awakened by the noise of the surf on the beach; but when I went out on the piazza there was no wind. Before morning the “City of Belize”—the very steamer that had nearly finished our journey in the Rio Polochic—arrived from Pansos. At daybreak I found that the bats had ruined my raw-hide lasso, the reins of my bridle, and had eaten the seeds of some *toranjas*, or shaddocks, which we had carefully saved for planting. We hung all these articles from the ceiling to avoid rats or cockroaches.

Frank and Santiago had no end of difficulty in getting our animals on board the steamer; but it was done at last, as everything else that Frank attempted, and just before noon we started, after an excellent breakfast on board, in which Señor Gomez, the newly appointed Jefe politico, joined us. We were now back to the land of rains; and as we steamed across the lake to Santa Cruz we had a tropical

downpour. As the steamer was out of fuel, we coasted the lake to a place about a league above Castillo de San Felipe, where, after getting some three cords of wood on board, we tied to the trees for the night. At daybreak we took on more wood, and then went on to the old fort, where the comandante had some wood to sell, and used his authority to press the soldiers and bystanders to load it. As it was Sunday there were plenty of loafers around; but one dandy who had on a clean shirt would not work, and another fellow had a stomach-ache and could not; but the military authority was respected, and the wood soon loaded. The pilot-house was a fine, roomy place on the upper deck, and our comfort was in marked contrast to the experience of the canoa-voyage up, some months before. Islands and lagoons succeeded each other rapidly, and we soon crossed the Golfete and were in the beautiful Rio Dulce. At three in the afternoon we arrived at the wharf in Livingston, and our pleasant journey was at an end.



Whistle from Las Quebradas.

CHAPTER IX.
IN THE OLDEN TIME.

The physical features of Central America are rich and varied; but the story of the races which have peopled it is tinged with a romance and clouded with a mystery which accord intimately with the cloud-capped summits, the impenetrable forests, and the earth-fires. Stories written in stone, whose authors no man knows, whose meaning none can read, carry us back beyond history and beyond legend; and until patient study unravels the enigma, as it must in time, our vision of the aborigines is illumined only by those legends which beautify and corrupt all history. We may treat all legendary lore as mythic if we are willing to forget that a myth is the creation of an advanced thought and civilization which we do not usually concede to the long-perished races who have preceded us; or we may simply accept what has been preserved for us, smile at its simplicity, wonder at its beauty, or puzzle our brains to connect and classify it with similar matter from other sources and of other times. In an uncontroversial spirit I would accept the slight glimpses of early human races which have lived upon this continent, and leave to others the task, agreeable to their tastes, of weighing, measuring, and analyzing these stories of a simple people who can no longer speak for themselves.

In most ancient times Votan[31] came to the coast now known as Tabasco, found savages inhabiting the country, whom by patient labor he civilized, thus

founding the Empire of Xibalbay[32] and the dynasty of the Votanides. He or his immediate descendants built Nachan or Culhuacan, whose ruins at Palenque in Yucatan have astonished all travellers and students since their discovery.[33] Similar ruins, inscribed with the same hieroglyphic characters, are found at Copan in Honduras, Quirigua, Tikal, and other places; and the arts of architecture and sculpture show in these remains a development not attained by any succeeding inhabitants of this continent until the present century. While Xibalbay was still extending its empire over portions of Mexico and Central America, another leader brought with him from the North a people called Nahoas, who founded a city not far from Palenque, towards the southwest, naming it Tula (whence this people are often called Tultecas). The chief bore a symbolic name, as is even now usual with the Indian tribes of North America, and Quetzalcoatl (serpent with the plumes of the quetzal), or Gucumatz,—as he is known in the Guatemaltecan legends,—by his superior ability (called magic by the people), brought his power to such a height as wholly to overshadow the flourishing Xibalbay, whose conquered inhabitants were scattered in various directions. Some went northward to Mexico and founded a monarchy (according to Clavigero, in the seventh century of our era), which after four hundred years of prosperity was destroyed by famine; and the survivors, led by their king, Topiltzin Acxitl, returned to the fruitful lands of Central America, and in Honduras founded the kingdom of Hueytlat, with the principal city of Copantl, now known by the wonderful ruins of Copan.

Other immigrations are mentioned by tradition, but no definite account of their origin is given. It

seems probable, however, that certain tribes, called Mam[34] or Mem, came from the North and destroyed both Tula and Nachan. Another inroad, led by the four chiefs Balam Agab, Balam Quitze, Mahucutah, and Iq Balam, advanced as far as Mount Hacavitz in Verapaz, north of Rabinal; and here these chiefs remained as freebooters and founded that tribe known as the Quichés. They constantly attacked their neighbors, and offered the captives taken in these encounters to their god Tohil, who, with Avilitz and Hacavitz, formed the trinity in the Quiché cult. Force and stratagem proving of no avail against them, the surrounding tribes gradually submitted; and when peace was established, the four captains conveniently disappeared, leaving the government in the hands of three sons, Iq Balam having no offspring. And now we have the curious account given by the unknown author of the "Popul Vuh," or sacred book of the Quichés, of which two translations exist, one in Spanish by Ximenes, the other in French by the Abbé Brasseur de Bourbourg. The annalist tells us that before the departure of the four chiefs they charged their sons to undertake a journey to the East; and the new rulers, in obedience to this command, passed the sea easily (Lago de Izabal?) and came to the city of a great lord called Nacxit,[35] who instructed them in the art of government and invested them with the feather umbrellas,[36] throne, and other symbols whose Indian names both translators fail to interpret.

On their return all their subjects received them with joy; but so numerous had the people become that Mount Hacavitz could no longer contain them, and now began the dispersion of the tribes.

One branch went westward and founded Izmachi, a city some distance westward of Santa Cruz del

Quiché. No rude Indios these who built Izmachi of stone and mortar.

From this centre grew the Quiché power, until it reached from the borders of Mexico to the Pacific Ocean, and eastward to the Lago de Izabal. Several tribes or feudatory monarchies owed allegiance to the ruler of Izmachi; and if we may believe the "Popul Vuh," we must recognize a feudal system quite as elaborate as that of Europe in the Middle Ages. A line of monarchs, extending to fourteen, or even twenty-four, exercised authority; but so obscure are the accounts that the line cannot at present be followed. Only this seems clear, that there were but three great families of the Quichés, and these lived in peace for a time in their new lands, perhaps during the fifth and sixth centuries of our era. At last the jealousy of the tribe of Ilocab, or the ambitious designs of the kings Cotuha and Iztayul, kindled the first of a long series of wars that in local importance rivalled those between Rome and Carthage. In the security of a long peace the guards of Cotuha were surprised by well-armed visitors from Ilocab; but so complete was the military system of the Quichés that immediately the hosts were collected, battled with the rebels, and after utterly routing them, reduced some to slavery, and sacrificed others on the bloody altar of Tohil.

The successors of Cotuha and Iztayul were Gucumatz and Cotuha II., during whose reigns the capital was removed to the site called Utatlan or Gumarcah. On this platform, so admirably adapted for fortification, palaces and altars, as well as fortifications, were built of cut stone. Watch-towers rose high in air, and answered to those in the surrounding mountain regions. The Plaza was paved

with a smooth white cement superior to the stucco of Pompeii, and the ruins so distinct forty years ago tell a plain story of an advanced civilization. It may be of interest to read what this most remarkable people say of themselves, that we may more clearly see them before us. Their greatness passed away, as did all the learning, art, and refinement of Athens and Rome, to be succeeded by ignorance, slavery, and degradation; and alas! this nation of the New World has left but few monuments to tell the story of what it once was.

So slight are the glimpses we have of that past, that the picture must be a shadowy outline at best; but it is worth while to trace even the outline, for the portrait will apply to the other inhabitants of Guatemala as well as to the Quichés. The wisdom of the kings was magic even to the Spanish annalists, and these tell of the “Rey portentoso” Gucumatz that, like the prophet Mohammed, he ascended into heaven, where he abode seven days; and that he descended into hell, where he tarried other seven days. He transformed himself into a serpent, a tigre, an eagle, and a mass of clotted blood, each change lasting seven days,—that mystic number of the Cabala and of European black art. “And surely,” says the Spaniard, “great was the respect he gained by these miracles before all the lords and all those of his kingdom.”

Nothing puzzles the student more than the duplication and interchange of names; but let it be remembered that the Quiché names that have come to us are rather titles, and this is especially the case with Gucumatz, a word equivalent to the Aztec Quetzalcoatl, which is applied to any distinguished reformer or leader of his people. Cadmus and George

Washington might both claim the title.

I will translate from the "Popul Vuh," using generally the Spanish version of Ximenes, as less influenced by the theories of the translator than the later one of Brasseur de Bourbourg. I begin with the creation of the world and of man.

"Then the word came to Tepeu Gucumatz[37] in the shades of night; it spoke to Gucumatz and said to him: It is time to consult, to consider, to meet and hold counsel together, to join speech and wisdom to light the way and for mutual guidance. And the name of this is Huracan, the Voice which sounds: the Voice of Thunder is the first; the second is the Flash of Light; the Lightning is the third. These three are the Heart of Heaven, and they descended to Gucumatz at the moment when he was considering the work of creation. Know that this water will retire and give place to land, which shall appear everywhere; there shall be light in the heaven and on earth: but we have yet made no being who shall respect and honor us. They spoke, and the land appeared because of them."

After the mountains and plains and rivers and all animals of the forest had been created, the gods proceeded to form man. First they made him of mud; but the rains descended and beat upon that being, and he dissolved. Not being able to make man according to their desires, they called to their aid the mysterious powers of Xpiyacoc and Xmucane, magic adepts, and by incantation learned that man should be made of wood, and woman of the pith of bulrush. This second edition of the human species was little better than the first, although more durable. The stiff, wooden images had neither fat nor blood; they could speak and beget children, but lacked

intelligence. Their eyes were never turned to heaven, and their tongues never glorified Huracan. Then there fell from heaven a torrent of bitumen and pitch on these ungrateful children, a bird named Xecotcovuch tore out their eyes, another, named Camulotz, cut their heads, while an animal called Cotzbalam ate their flesh, and the Tucumbalam crushed their bones. The poor wretches climbed their roofs to escape the flood; but the walls crumbled beneath them, and the trees fled from them, and when they sought refuge in the caves of the mountains, the stone doors shut in their faces. Of all the numerous progeny of this wooden couple, only a few were preserved, and from them have descended the apes of the present day.

A third attempt was more successful, as maiz was used to form blood and flesh and fat. Xmucane ground the corn and cunningly concocted nine beverages, which were changed into the various humors of the body. This first successful creation was fourfold, and the names of the quartette were identical with those of the four chiefs who conducted the Quichés to Mount Hacavitz. While these primitive men slept, their wives were built,—not, however, by robbing the men, but of the remaining portion of the same meal.

The celestial powers did not, however, have everything as they wished. The man was tolerable, but by no means perfect, for his teeth were defective; and he was built too much like the apes to carry himself erect with perfect safety, hence he became ruptured. But there was no time to try again, for they had already a rival in the person of Vucub-caquix,—a sort of Lucifer who imagined himself to be the sun, moon, and all the stars. How he was punished, the

"Popul Vuh" tells at length; and I am tempted to translate literally, using the text of Ximenes, that my readers may judge both of the style of this sacred book, and also of the mode of thought and the belief among the Quichés at the time when Utatlan was in all its glory.

"This is, or was, the cause of the destruction of Vucub-caquix by the two young men. Hunahpu, so was called the one, and the other was called Xbalanque: these moreover were gods, and therefore that arrogance seemed evil to them, in that it claimed superiority to the Heart of Heaven; and they said, the two young men: 'It will not be right to let this go on, for men will not live here on earth; and so we will try to shoot him with the blow-gun (*cerbatana*) when he is eating: we will shoot him and disable him; and then will be dispersed his riches, his precious stones, and his emeralds, which are the foundation of his greatness;' and so said the youths, each one with his blow-gun on his shoulder. Now, that Vucub-caquix had two sons: the elder was called Sipacua, and the second was called Cabracan, and their mother was named Chimalmat. She was the wife of Vucub-caquix. And that son of his, Sipacua, whose pasture-ground was great mountains, that one moreover in one night before dawn made the mountain called Hunahpupecul, Yaxcanulmucamob, Hulisnab, because in a night Sipacua made a mountain; and his brother Cabracan (this is, of two feet) used to move and shake the mountains both great and small. And so moreover these two sons of Vucub-caquix became proud; and thus said Vucub-caquix: 'Know ye that I am the sun.' 'And I am the maker of the earth,' said Sipacua; 'and I,' said Cabracan, 'am he who moves the earth, I will demolish all the world.' And thus the sons of Vucub-

caquix became arrogant even as their father was arrogant; and this seemed evil in the sight of the two youths, Hunahpu and Xbalanque. Nevertheless our first fathers and mothers were not yet created, and thus the two youths plotted the death of Vucub-caquix, of Sipacua, and of Cabracan.

"And here follows the telling of the blow the two youths gave to Vucub-caquix, and how each one was destroyed by his arrogance.

"This Vucub-caquix had a tree of *nances*, because that was his only food; and every day he climbed the tree to eat the fruit. This Hunahpu and Xbalanque had observed that it was his food; and they lay in ambush, the two youths, under the tree hidden among the leaves of the grass. And then came Vucub-caquix; and while he was yet climbing the tree, Hunahpu fired a shot which was well aimed, and hit him in the jaw; then, groaning, he fell to the ground. And as soon as Hunahpu saw Vucub-caquix fall, he sprang with the greatest promptitude to catch him. Then Vucub-caquix seized Hunahpu's arm and tore it off at the shoulder; and then Hunahpu let Vucub-caquix go; and so the youths had the best of it, for they were not beaten by Vucub-caquix, who ran home carrying Hunahpu's arm, but holding his broken jaws.

"'What has happened to you?' said Chimalmat to her husband Vucub-caquix.

"'What has happened? But two devils shot me with a blow-gun and unhinged my jaw; they knocked out all my teeth,—and how they ache! But I have here the arm of one of them. Put it in the smoke over the fire against they come for it, the two devils!' said Vucub-caquix. And then she hung up the arm of Hunahpu.

"But in the mean while Hunahpu and Xbalanque were consulting as to what was to be done; and having taken counsel, they went to speak to an ancient man whose hair was white, and an old woman who in truth was very old; and so great was the age of the couple that they walked bent double. The old man was called Saquinimac, and the old woman was called Saquinimatzitz. And the two youths said to the old man and the old woman,—

"'Come with us to get our arm at the house of Vucub-caquix. We will go behind you, as if we were your grandchildren whose father and mother were dead; and if they question you, say that we are in your company, and that you are travelling about extracting the maggot that eats the grinders and other teeth; and so Vucub-caquix will look upon us as mere lads, and we will advise you what to do further.' Thus spoke the two youths.

"'It is well,' said the elders; and then they came to the corner of Vucub-caquix's house, where he was reclining on his throne. And then they went on, the two elders, and the two boys playing behind them, and they went under the house of Vucub-caquix, who was groaning with the pain of his teeth. When he saw them, the elders and the boys, he asked,—

"'Whence come you, grandparents?'

"'We, lord, are going to seek our remedy.'

"'How are you seeking your remedy? Are these your sons who are with you?'

"'No, lord, they are our grandchildren; but we have had compassion on them so far as to give them a bit of tortilla,' the elders replied.

"Just then the lord had a very sharp twinge of

toothache, so that he could hardly speak; and he begged them to have pity on him.

"'What is it that you do; what do you cure?' said the lord.

"'Sir, our cure,' said the elders, 'is to extract the maggot from the teeth; and we cure eye-troubles, and likewise broken bones.'

"'Well, if this is true, cure my toothache; for I am without rest, and cannot sleep, and my eyes trouble me also, since the two devils shot me, and so I cannot eat. Now have compassion on me, for all my teeth are rattling about!'

"'Surely, sir, it is a maggot which injures you; we will pull out your teeth and put others in their place.'

"'Oh! perhaps that won't succeed; but I can't eat without my teeth and eyes.'

"And they replied,—

"'We will put others in their place; we will put in ground bone.'

"But this ground bone was only white corn.

"'It is well,' said the lord; 'pull them out and put them in order.'

"And then they took out the teeth of Vucub-caquix; and it was only white corn that they put in the place of teeth, and the kernels of corn shone in his mouth. And his countenance fell, and he never more appeared a lord; but they took out all his teeth, and left his mouth smarting. And when they cured the eyes of Vucub-caquix, they tore out the pupils. Then they took away all his money, and he did not know it; for he was no longer great nor arrogant. And this was done by the counsel of Hunahpu and Xbalanque.

"And Vucub-caquix died, and then Hunahpu took his arm; and also Chimalmat died, the wife of Vucub-caquix; and so was lost all the treasure of Vucub-caquix. Then the doctor took all the precious stones which had puffed him up with pride here on earth. The old man and old woman who did these things were divine; and when they took his arm, they put it in its place, and it reunited and was well. And they did these things only to cause the death of Vucub-caquix because his pride seemed an evil thing to them. So did the two youths, and it was thus done by the command of the Heart of Heaven."

Then follows an account of the pride and evil-doing of Sipacua, and how he destroyed the "*cuatrocientos muchachos*" (four hundred young men); and the Chronicle continues:—

"Then follows how Sipacua was conquered and killed; how another time he was overcome by the youths Hunahpu and Xbalanque: to them he appeared contemptible because he had killed the four hundred youths. And Sipacua was alone fishing and hunting crabs on the river banks; this was his every-day diet. Days he spent seeking his food, while at night he moved mountains. Then Hunahpu and Xbalanque made an image of a crab. They made the large claws of the crab of a leaf which grows on the trees and is called *ec*, and the little ones of other smaller leaves called *pahac*; and the shell and claws they made of flat stones. And they made it and placed it in a cave under a hill called Meaban, where he was conquered. Then they went along and met Sipacua by the rivulet, and asked him where he was going. And Sipacua replied,—

"'I am not going anywhere; I am only looking for something to eat.'

"And they asked him, 'What is your food?'

"'Only fishes and crabs, and I have found none; and since the day before yesterday I have not eaten, and now I cannot bear my hunger.'

"Then said they: 'There is a crab below in the gulch; in truth it is very large: would you might eat that! We wanted to catch it, but it bit us, and we were in terror of it, or else we would have caught it.'

"'Have pity on me and take me where it is,' said Sipacua.

"'We do not wish to,' said they; 'but go, you cannot lose your way. Go up stream, turn to the right, and you will be in front of it under a great hill; it is making a noise and making *hovol*: you will go straight to it,' said Hunahpu and Xbalanque.

"'O miserable me! if perchance you had not found it,' said Sipacua. 'I will go and show you where there are plenty of birds; you will shoot them with the blow-gun. I alone know where they are, and in return for them I will go under the rock.'

"'And shall you truly be able to catch it? Do not make us return for no purpose; because we tried to catch it, and could not, because we crawled in on our bellies and it bit us; and so by a trifle we could not catch it. So it will be well for you to go in pursuit tail-end first.'

"'It is well,' said Sipacua.

"And then they went with him to the gulch, and the crab was lying on his side, and his shell was very bright-colored; and here under the valley was the secret of the youths. 'Hurrah!' said Sipacua, joyfully; and he wished to eat it, for he was dying with

hunger. And he tried to enter lying down; but the crab rose up, and he at once retreated. And the youths said to him,—

"'Didn't you catch it?'

"'I didn't catch it, I just missed it; but as it has gone up high, it will be well for me to enter head first.'

"And immediately he crawled in head first; and when he had got in all but his knees, the mountain toppled down and fell quietly down upon his breast, and he returned no more. And Sipacua became stone. And thus was Sipacua conquered by the youths Hunahpu and Xbalanque; and they tell that in ancient times it was he who made the mountains, this elder son of Vucub-caquix. Under the mountain which is called Meaban he was overcome, and only by a miracle was he conquered; and now will we tell of the other who was puffed up with pride.

"The third fellow who was arrogant, the second son of Vucub-caquix, who was called Cabracan, used to say, 'I am the one who destroys mountains.'

"And so it came to pass that Hunahpu and Xbalanque declared that they would put an end to Cabracan. Then Huracan, Chipa-caculha, and Raxa-caculha spoke unto Hunahpu and Xbalanque, saying that the second son of Vucub-caquix must be destroyed also.

"'This have I commanded, because he does evil upon the earth; because he makes himself very great; and this ought not so to be. Arise now, and seek him towards the sunrise.' So spoke Huracan to the two youths.

"'It is well,' they replied, 'and it seems good to us

to risk. There is no danger. Is not your greatness, O Heart of Heaven, above all?' Thus spoke the two youths in reply to Huracan, and at the very time Cabracan was shaking the mountains. Hardly had he shaken them a little, kicking with his feet on the ground (then he was breaking the mountains great and small), when the two youths met him and asked, —

"'Where are you going, boy?'

"'I am not going anywhere,' he replied; 'I am only here shaking the mountains, and I shall always be shaking them.'

"Then said Cabracan to Hunahpu and Xbalanque, 'What do you come here for? I don't recognize you, nor do I know what you are here for. What are your names?'

"'We have no name,' replied they; 'we are only hunters with the blow-gun, and we catch birds with bird-lime. We are poor and have nothing, and we are tramping over the mountains great and small. Here in the East we see a great mountain, and its sweet odor is very pleasant. And it is so lofty that it overtops all the other mountains. So we have not been able, it is so high, to catch a single bird. So if it be true that you overturn mountains,' said Hunahpu and Xbalanque, 'then you will aid us.'

"'It certainly is true,' said Cabracan. 'Have you seen this mountain of which you speak? Where is it? I will look at it, and I will topple it down. Where did you see it?'

"'There,' said they, 'it is, where the sun rises.'

"'Very well,' said Cabracan, 'let us go; and it will be strange if we don't get some birds between us.

One will go on the right hand, the other on the left. We will take our blow-guns, and if there is a bird we'll shoot him.'

"So they went on happily, shooting birds (and it should be said that when they shot, it was not with balls of clay, but only with a puff of breath did they knock down the birds), and Cabracan went on astonished. Then the youths made a fire and set about cooking the birds in the fire; and one bird they anointed with *tizate*, white earth they put on it. 'This we will give him,' said they, 'when desire is strong upon him, smelling its savor. This our bird shall conquer him, for in conquering him he must fall to the ground; and in the ground must he be buried (wise is the Creator!) before human beings are brought to light.' So spoke the two youths, and to themselves they said it. Great desire had Cabracan in his heart to eat of it. Then they turned the bird on the fire and seasoned it. Now it was brown, and the fat of the birds ran out, and the savor was delectable; so Cabracan was most eager to eat them, and his mouth watered, and the saliva dropped from it, because of the delicious smell the birds gave out. And then he asked them,—

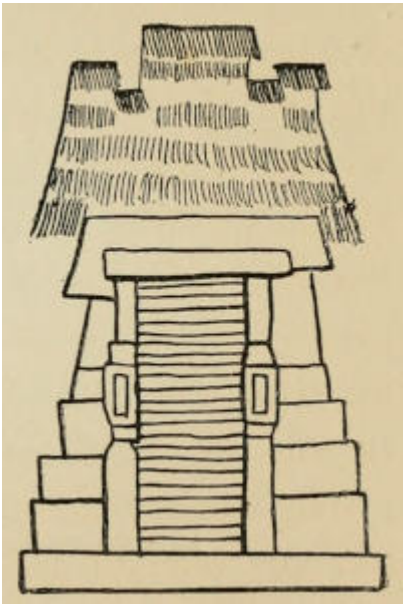
"'What is this your food? Truly it is an appetizing odor I smell; give me a bit.'

"He spoke, and then was given a bird to Cabracan for his destruction; and he quickly finished the bird. And then they went on, and came to the birthplace of the sun, where was that great mountain. But Cabracan was now sickened, and he had no strength in his hands and feet, because of that earth which they had put on the bird he ate; and now he could no longer do anything to the mountains, nor could he overturn them. So the youths tied his hands behind

him, and likewise tied his feet together, and threw him on the ground and buried him. So was Cabracan conquered by Hunahpu and Xbalanque alone. It is not possible to tell the feats these youths did here on earth."

The author of the "Popul Vuh," however, goes on to tell of some of the wonders they did in Xibalbay, —which Ximenes considers hell,—and my readers would find the story very amusing; but I have translated perhaps enough to show the ideas of the Quichés ten centuries ago.

The Quiché kings had removed their capital from Izmachi to Gumarcah,—afterwards called Utatlan,— not far from the modern Spanish town of Santa Cruz del Quiché; and it was the poor remains of this city, destroyed three centuries and a half ago, that I visited in journeying through Guatemala. The situation was a fine one, well suited for the metropolis of an extensive kingdom; for while roads and mountain-passes gave access in all directions, the very mountains formed a wall easily guarded, and watch-towers to discover approaching danger. It was situated not unlike Granada on the Vega in the Sierras of Andalusia; and like that noble capital of the Moorish kingdom, it was well fortified, and embellished with all the knowledge and taste of the time.



Ancient Temple. (*From an old Manuscript.*)

On the platform where Frank and I had stumbled over the confused piles of rubbish and tried in vain to trace the buildings, so distinct only forty years before, the mighty Gucumatz had built high the altar of the bloodthirsty Tohil,—a steep pyramid in the centre of the rebuilt Gumarcah, now called Utatlan. Our knowledge of the ceremonial of that Quiché worship is but slight; but enough is known to give an air of reality to the pile of rubbish that alone marks the site of the holy place of this ancient kingdom. I sat near the base of the altar, and the city walls arose about me; the ruin of three centuries departed, and again all was new and full of busy life. Around me, but at a suitable distance from the altar-temple, were the palaces of the princes, built of cut stone and covered with the most brilliant white stucco. From the flat roofs of these massive dwellings floated

banners of many colors and strange devices; arches of evergreens and flowers spanned every entrance to this Plaza, whose floor was of the smoothest, whitest stucco, and heaps of fragrant flowers were piled at the palace-doorways and about the great altar that towered like a mountain of light in the midst. All around me were the phantom forms of the Indios, clad in garments of rich colors, but silent and expectant; I seemed to know them all and understand their tongue. It was the most sacred festival of the year; the rains had ceased, and the summer was beginning,—and a summer at Utatlan was a delight unequalled in the outer world.



Indio Sacrificing.

For many months the high priest and king had hidden himself from the sight of man, high in the mountains that overlook the Quiché plain. In his *casa verde* he was engaged in prayer and meditation, while his only food was fruit and uncooked maiz. His body was unclothed, but stained with dismal dyes; and twice every day, as the sun rose and set, he cut himself with an obsidian knife on his arms, legs, tongue, and genitals, that he might offer his choicest blood to the divinity he worshipped. Once only in his life must he do this; and scattered in the remote mountain-hermitages were many nobles keeping him company in the spirit. These were the fathers of the young men who had not yet offered their blood, and had been selected to be the god-children of their king and priest. In these lonely retreats the fathers taught their sons manly duties, and drew their blood from the five wounds.[38]

The votaries had gathered from their various cells at the sound of the drum, which was beaten only on most solemn occasions, and were marching in procession to the Plaza. I could see them as they filed on to the narrow causeway that led into the town, and then they were lost to sight as they climbed the steep ascent. In profound silence these men and youths, naked as they were born, entered the enclosure and seated themselves at the foot of the altar-steps. The solemn silence was now suddenly broken by a crash of trumpets and drums, while a procession of a different kind took up its march to the temple. Bright colors and the gleam of gold and precious stones, the clang of barbaric music and the sound of holy songs, reached the eye and ear as the idols, which had been carefully concealed since the last fiesta, were now brought to the place of sacrifice. Strange things these were,—not of “heaven

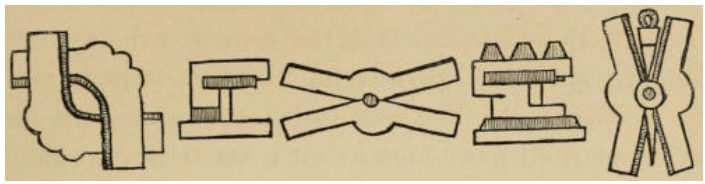
above, nor the earth beneath, nor of the waters which are under the earth," but carved from wood and stone and decked with beaten gold, hung with jewels, and borne triumphantly on the shoulders of the noblest citizens. Then all was joy and bustle in the Plaza. The hermits were clothed with new robes and welcomed back with honor, the high priest put on his robes and mitre, and for a while the people gave themselves up to music and dancing and ball-playing; it seemed as if life had no other end. But a terrible solemnity was to come. Even among the dancers I saw men clothed in a peculiar but rich garb,—generally of another people, but not always foreign; and I knew that these men had for days before the festival gone freely through the town, entered any house, even the royal palace, where the food they sought was freely given them, and they were treated with marked respect. Outside the city-walls were some of them, with collars about their necks, attended by four officers of the king's guard. Food, drink, and even the women were free to these honored men; but they were captives taken in war, or perhaps men who were obnoxious to the king, and were to be sacrificed to Tohil. A terrible death awaited them; but they regarded their fate as a matter they could not help, and with Indian stolidity enjoyed the frolics of the people and smiled at care. It was strange to see how little any one seemed to be affected by the certainly approaching death of their fellows. Every one knew what was coming; but no dread anticipation marred the festive scene.

The music ceased in the Plaza, the chief idol was placed on the altar-top, and the priests and nobles seized the victims by the hair and passed them, struggling, one by one up the steep steps of the altar to the chief priest, who stood high on the

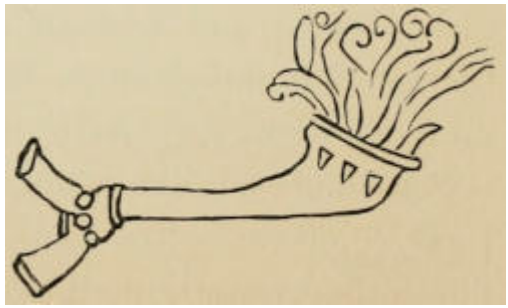
sacrificatorio in the sight of all the people. There was no murmur, not even a shudder, among the multitude, only the involuntary shrieks of the sacrifice as the priest cut into his breast with the stone knife and tore out his quivering heart. Holding this in the golden spoon of the temple, he placed it reverently in the mouth of the idol, loudly chanting this prayer: “Lord, hear us, for we are thine! Give us health, give us children and prosperity, that thy people may increase! Give us water and the rains, that we may be nourished and live! Hear our supplications, receive our prayers, assist us against our enemies, and grant us peace and quiet!” And the people cried, “So be it, O Lord!”

The body had been extended on a rounded sacrificial stone and the neck held securely by the yoke; but now it was hurled down the side of the pyramid where there were no steps, and those appointed carried the remains to the caldron whither those who had the right came for the cooked meat, the hands and feet being reserved for the officiating priest.[39] One by one the victims were offered to the idol, while the pyramid was no longer white, but crimson; and their death-shrieks were ringing in my ear, when Frank laid his hand on my shoulder and asked if I was asleep. Called back to deserted ruins and the humdrum present, I could not entirely shake off the impression of the past. On that little mound where we were sitting so peacefully, hundreds, yes, thousands, of our fellow-men had writhed in agony to satisfy the enmity of their fellows or to be an acceptable offering to the gods who were supposed to be their creators.[40] Truly there are few nations whose religious history is pleasant reading; let us turn to other matters.

The more artificial *civilization* becomes, the weaker is the desire for offspring; and we must relegate the Quichés, by this rule, to a very primitive state, for the burden of their prayers was "Give unto us children," and their faith was incarnate in works. They believed, with the psalmist, that "children are an heritage of the Lord; happy is the man that hath his quiver full of them." Hence the birth of a child was a most auspicious event, to be celebrated with feasts and rejoicings, and each returning birthday was duly remembered. With the truest mercy, they put an end to all children born deformed or defective in mind or body; hence deformed or idiotic persons are exceedingly rare among their descendants.



Ideographs.



Ancient Incense-burner.

The Quichés possessed the art of writing, though in logographs or ideographs, and they were skilled in the use of colors.[41] I present some of the more common forms, traced from the copies in

Kingsborough's "Antiquities." The first, two interlocked elbows, signifies the fourth day of the month; one of the elbows was colored red in the manuscript, while the other was green, both having an inner border of yellow. The simple hinge was of blue and red, with a yellow articulation; the hinge enclosing a dagger was yellow and green with red inner borders, and the dagger was red, yellow, and blue. The character denoting or representing a temple is readily recognized, and its usual colors are red and yellow; but it must not be supposed that these colors were always the same, they evidently depended on the taste of the scribe. A rude figure of a censer with a long handle through which the priest could blow upon the burning gum copal used as incense, always denoted a sacrifice. This art of pictorial representation could not strictly be called writing, but was a very useful substitute for it, and it was continued long after the Conquest. I have thought, after looking at some of the caricatures of the priests of the new worship which was forced upon these Indios, of the rite of baptism, and of the sacrifice of the Mass, that perhaps these unfortunate subjects had as much influence in the wanton destruction of aboriginal literature as had the alleged doctrine of devilish things with which the books were said to be imbued. The old Spanish priests ought to have felt little fear of a creature they knew so well as they knew Satan. The shaven crowns of the padres were easily represented even by less skilled draughtsmen than the Quichés, and the new doctrines gave the irreverent splendid chances for effective caricatures.

In textile work they were advanced, obtaining results with their rude hand-looms that even to-day would hold their own against the machine-made

fabrics of the present day for durability and aptness of design, even as the barbaric cashmere shawl cannot be equalled by the skilled artisans of France. To-day the weavers of this region produce cloths of very attractive design and made of honest material, while their shawls or blankets are often works of art. I once watched an Indian woman weaving a girdle on a narrow loom not more than six inches wide; and without pattern before her she traced figures resembling those in the old manuscripts, though mingled with very modern-looking pictures. The country abounds in dye-stuffs, so it is not surprising that their color-sense has been well developed by use. For fibres they were limited to cotton and wool in the looms, reserving the pita and other coarser fibres for hammocks and *redes*.

Pottery of good shape and well baked is found among the ruins of Utatlan, and Stephens saw a figure of terra-cotta that must have required no little skill to model and bake. All the potsherds a diligent though not extended search gave us were of dark red color, hard baked, and evidently portions of spherical vessels. Not a sign of roof-tiles was seen, nor any painted fragments, although figured work was common enough.

The Quiché rivers abounded in fish, and the forests and mountains in game, while the fields produced abundant crops with little labor. No wonder the Spanish conquerors found a civilization that astonished them, a wealth which roused all their terrible cupidity, but a resistance more determined and bloody than they had found in Mexico.

It may not interest my readers to go deeply into the forms of government in those ancient times, but it may be said that it was an aristocratic monarchy

hereditary in this peculiar way. When the principal king (Ahau-Ahpop) of the dual reign (there were always two kings at a time) died, the crown he had worn passed to his oldest brother, who performed the functions of Ahpop-Camhá, and as second king had share in the government. The oldest son of the Ahau-Ahpop, who during the life of his father had been Nim-Chocoh-Cawek, became Ahpop-Camhá, and his cousin (son of the king's brother), who had been Ahau-Ah-Tohil or high priest of this god, Nim-Chocoh-Cawek, the elder son of the new sovereign taking the vacant post.

In this wise method of civil service regencies were never needed, and each king had fitted himself, by exercise of subordinate but important offices, for the supreme rule. If any one of these dignitaries proved his unfitness for advancement, he was passed over, and the next in rank chosen; and thus through a long series of offices. The corrupting influences of so-called popular elections, which are usually manipulated by a few conscienceless politicians who use the "dear people" simply as cat's-paws, are certainly avoided; but was it not possible to hasten the succession, or to have a sort of "commission of lunacy" condemn an unpopular candidate, and so advance another unrighteously? The insignia of the four chief dignitaries were feather canopies, of which the king had four, and the others in descending series. A council of the chief families advised the monarch in his government.

The judges, who were also tax-gatherers, were appointed from the noble families, and held office during good behavior; death was the penalty for impeding these magistrates in their office. Capital punishment was rendered more bitter by the

confiscation of the victim's possessions and the enslavement of his immediate relatives. Breaches of trust ranked first among crimes, and homicide, adultery, confirmed robbery, larceny of sacred things, witchcraft, rape, were all capital crimes; and the strangers who hunted or fished in the forests or rivers of the country, as well as the slaves who ran away the second time, were punished with death.

There were laws against polygamy, and only the first wife was legitimate; but, as among the most civilized nations of modern times, there were many concubines. In Guatemala perhaps this practice was more open and honest than in modern states and times. Only the children of the lawful wife could inherit, and the man who died without lawful issue was buried with his wealth, consisting generally of cotton cloths, ornaments, feathers, and cacao, which served as money. The laws of all the Central American tribes were severe, and differed somewhat from those of the Quichés. But it has not seemed desirable to discuss these here; we will rather consider some of the customs common to most of the inhabitants of the kingdom of Guatemala, and so pass beyond the walls of Utatlan, to which, however, we shall presently return.

Agriculture among the Central American nations was mostly confined to the planting of maiz and beans (*frijoles*), which were staple products and served as a currency in gross, while cacao, which was said to have been first planted by Hunahpu, eighth king of Quiché, served for small change. They cultivated cotton, which furnished their clothing, and tobacco, which they smoked with moderation. Chocolate was not a common drink, but reserved for the nobles and soldiers who had distinguished

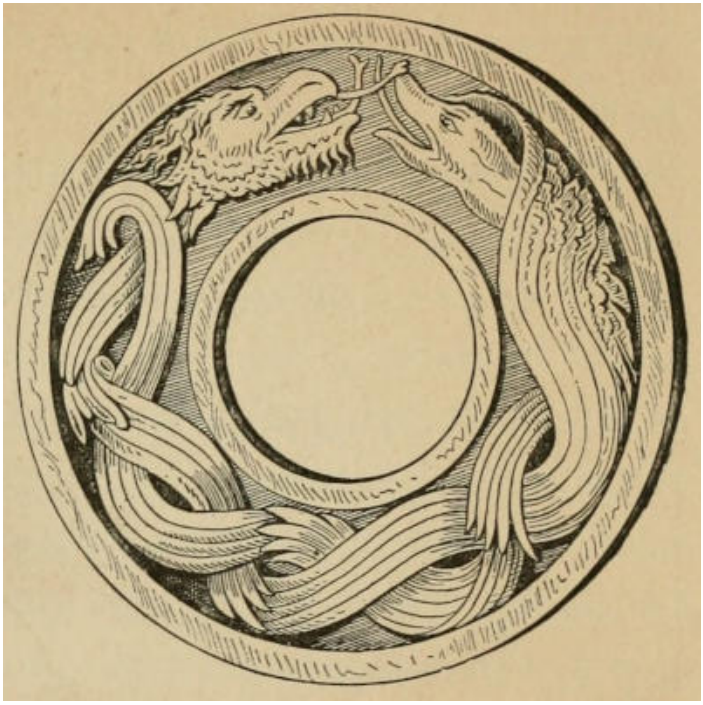
themselves in battle. The cacao was planted with great ceremony. Seeds of the largest pods were selected and carefully fumigated with copal and other gums; and these seeds were then left in the open air four nights during the time of the full moon, and meanwhile the planters attended assiduously to their marital duties. Onions, plantains, potatoes, yams, chickpease, squashes of various kinds, supplied their table, and many native fruits added to their comfort. The Indios then, as now, were very fond of flowers; but whether they generally cultivated them, or found enough growing spontaneously, we do not know. Certainly there were royal gardens at Utatlan.

In manufactures, weaving was of first importance, and the threads were dyed with indigo, cochineal, or purple. Embroidery was also much used. Then from fibrous plants they plaited hammocks and nets, from reeds (*junco*) they wove hats of great durability, and from withes, baskets and sacks. The potter's work was also of great importance, and the vases, bowls, and jars, often of great size, were colored with certain waters and mineral deposits. I do not know that they had any glaze, other than perhaps salt.

They had no iron, but they made tools from an alloy of copper and tin to which they gave an extraordinary hardness, and they also used obsidian for knives and cutting instruments generally. Remains of knife-factories are common enough through the country, and often, too where the raw material is not *in situ*. Gold was found in the streams, and the goldsmiths attained no little skill in making ornaments, which were often enriched with precious stones, especially opals from Honduras. Curious feather work was brought from Tesulutan in Verapaz.

They made paper from a bark called *amatl*, and also used parchment. Maps were plotted, and the scribes had books in which were entered all the divisions of the land; and to these, as to a registry of deeds, were referred all disputes about real estate. Chroniclers there were who compiled great books, many of which Las Casas saw; and these, he tells us, were burned by the early missionaries, who have thus earned the curses of succeeding generations. Superhuman must have been their good deeds to counterbalance this destruction!

The Quichés, Cakchiquels, and nearly all the other tribes divided the year into eighteen months of twenty days, adding five days (consecrated to Votan) to complete the cycle, and every fourth year still another day. There were twenty day-names, of which we have three slightly differing lists; but the month was not subdivided into weeks.



Stone Ring for Ball Game.

We know but little of the games and amusements of the Indios in ancient times; but Torquemada has described[42] for us one national game, which seems to have required more skill and agility than the game of court-tennis (I do not speak of the effeminate lawn-tennis). The court consisted of two parallel walls very thick, and about one hundred feet apart. These walls were thirty feet high, and in each, at a height of from twenty to twenty-four feet, was a stone ring usually sculptured in some careful manner. At the open ends of the court were two little temples. A ball of rubber, large and very hard, was used by the players, who received the coming ball, not on a bat or racket, but on the padded buttock,

from which the player endeavored to throw it through the ring, but without touching it with his hands. As the hole was only about eighteen inches in diameter, this was a most difficult feat, requiring great flexibility of the pelvic and thigh muscles. The victor was allowed to take the clothes of any of the spectators; so it may be supposed these went to the game in scant garb. Remains of these ball-grounds are found in many cities, and the stone ring of the illustration is at Chichen Itza; it is four feet in diameter, and decorated with the symbols of Quetzalcoatl.

A nation of warriors, it would be supposed their arts would provide arms both offensive and defensive; but there seems to have been nothing of peculiar originality. Arrows and darts, often poisoned, hatchets and wooden swords, in which were inserted obsidian teeth, were their weapons of offence, and those of defence were coats of quilted cotton, which the Spaniards were not slow to adopt, and shields of skins lined with cotton. While the generals and other officers were clothed in skins of pumas, jaguars, eagles, and other animals, it does not appear that the rank and file had any especial uniform.[43] All joined battle with yells and the lugubrious blasts of the *tun* or *teponaztles*,—a sort of trumpet sounding even worse than an Alpine *lure*.

Let us return to Utatlan, and follow for a while the fortunes of the Quichés. Under brave kings their bounds had extended, and towns, tribes, and nations were compelled to acknowledge the kings of Utatlan as their lieges. In all this external prosperity, internal dissensions arose; and the *plebs*, incited by demagogues, demanded privileges which the king, Quicab, was compelled to grant after the palaces of

the nobles had been sacked by the mob. Another more serious trouble arose from this mob-rule. It was the custom for the rulers of the conquered tribes to reside at court at least a part of the year; and the two kings of the Cakchiquels, Huntoh and Vucubatz, were visiting Quicab, when a street-riot, of no importance in itself, turned the mob against the Cakchiquels, and they loudly called upon Quicab to surrender the Cakchiquel kings to their fury. The wise old king warned these of their danger, and advised them to retire to Iximché, or Tecpan Quauhtemalan. They did so, and this city became their capital. Now the fortunes of the Cakchiquels wax, while those of the Quichés wane. The new capital is fortified, and its inhabitants prepare for the strife evidently impending.

The first attack is made by the Quichés, who are beaten, and for a few years remain quiet. Their king Quicab dies, and Tepepul II., the ninth king, reigns with Iztayul III. The kings of the Cakchiquels were now Oxlahuhtzi and Cablahu-Tihax, under whose reign a famine, caused by unusual cold, troubles the capital. The Quichés saw a chance again to subdue their rebellious vassals, and an army was gathered, which with great pomp set out from Utatlan, carrying the god Tohil with it. A deserter from the Quiché army warned the kings of Iximché of their peril, and they bravely prepared for the contest. In the Cakchiquel Chronicle we have this description of the battle:—

“As soon as the dawn began to brighten the mountain-tops the war-cries were heard, standards were unfurled, drums and conchs resounded, and in the midst of this clamor the rapidly moving files of the Quichés were seen descending the mountains in

every direction.

"Arrived at the banks of the stream that runs by the suburbs of the city, they occupied some houses and formed in battle under the command of the kings Tepepul and Iztayul.

"The encounter was awful and fear-inspiring. The war-cries and the clangor of the martial instruments stupefied the combatants, and the heroes of both armies *made use of all their enchantments*. Notwithstanding, after a little the Quichés were broken, and confusion entered their ranks. The most of their army fled without fighting, and the losses were so great that they could not be calculated. Among the captives were the kings Tepepul and Iztayul, who surrendered, together with their god Tohil, the Galel-achi and the Ahpop-achi, grandfather and son of the keeper of the royal jewels, the die-cutter, the treasurer, the secretary, and plebeians without number; and all were put to the sword. Our old men tell us, my children, that it was impossible to count the Quichés who perished that day at the hands of the Cakchiquels. Such were the heroic deeds with which the kings Oxlahuhtzi and Cablahu-Tihax, also Roimox and Rokelbatzin, made the mountain of Iximché forever famous."

After this defeat the Quiché kings appear in history only as names,—of which seven, including two appointed by the Conquistadores, complete the list. Dull as was their decline, their ending was brilliant; and none of the people of Central America made such a brave struggle for independence as this grand old tribe.

Other nations occupied portions of Guatemala; and before we follow the course of the Cakchiquels we

may consider some of these. In Soconusco were several bands of Tultecs who had left the Aztec plateau, and in course of time were attacked by Olmecs and reduced to the most abject slavery. At last this became unbearable, and by the advice of their priests they decided to emigrate; and under sacerdotal guidance they journeyed twenty days along the Pacific coast, until they came to the Rio Michatoya, where the priest who had led them sickened and died. The delay and uncertainty this event caused resulted in the foundation of Itzcuintlan (Escuintla) by some who were weary of the journey. The greater part went on twenty leagues farther; and here came another halt, half remaining there at Cuscatlan (San Salvador) and Xilopanco (Ilopango), while the others went on to the Gulf of Conchagua, on the bounds of Honduras and Nicaragua. These people were called Cholutecas, or Exiles, and their descendants Pipiles.

The Cakchiquels soon got into trouble with a branch of their own people,—the Akahales, who occupied the country between the Volcan de Pacaya and the Lago de Izabal. The king of the Akahales was Ychal-amoyac,—a brave and wealthy man, whose capital, Holum, rivalled Tecpan Quauhtemalan. His wealth was coveted by the victorious Cakchiquels, and he was summoned to their court. Warned of the impending fate, he obeyed the summons, accompanied only by five of his friends. As they entered the audience chamber, in the very presence of the two kings the unfortunate Akahales were assassinated. Their riches were seized, and their towns quietly incorporated into the Cakchiquel kingdom.

Although the Akahales seem to have submitted

without fighting, some of the neighboring tribes saw with concern this lawless act of the powerful kings of Tecpan, and felt that their turn might come next. Wookaok, king of the Atziquinihayi, whose country bordered on the Lago de Atitlan, and Belehe-Gih, a mountain cacique on the borders of Quiché, became leaders; and the former intrenched himself in a strong fortress which the Cakchiquels besieged for fifteen days, and on its fall they put to the sword the entire garrison.

Now the Cakchiquels were by far the most important of the ruling tribes of Central America, and it was near the close of the fifteenth century. The white men had already landed on the coast of America, and the history of the tribes was hastening to a close. Insurrections here, treasons and plots there, make the substance of what there is to tell. The attempt of Cay-Hunahpù to incite rebellion shook the kingdom, but failed in the end. Revolutions gradually loosed the feudal chains that bound the subject tribes, and several of them proclaimed their independence. Chief among these were the Sacatepequez, who chose a king from their own tribe with the title Achi-Calel, and the capital of their kingdom was Yampuk; only three kings reigned, until the Conquest. The Pokomans from Cuscatlan came to Sacatepequez seeking land, and they were well provided with lands and settlements by the Sacatepequez, that they might not ally themselves with the hated Cakchiquels.

In 1510 the king of the Cakchiquels, Oxlahuhtzi, died, and the next year his colleague, Cablahu-Tihax, died also; and Hunig and Lahuh Noh succeeded their fathers. Their reign was remarkable for an embassy sent by Montezuma to the kings of Central America.

What the object of the Mexicans may have been, the Chronicles do not explain. Fuentes supposes that not Montezuma, but the eighth Mexican king Ahuitzotl was the one who tried to communicate with his southern neighbors. Certainly this king carried his arms as far as Nicaragua along the shores of the Pacific Ocean; but there is no proof that he ever penetrated the interior of Guatemala. Whatever the ambassadors wanted, whether conquest or an alliance against the coming invaders, they met with poor success. At Utatlan the Quiché king refused to listen to them, on the excuse that he could not understand what they said. They went thence to Tecpan, where they found a better reception; but we do not hear that they made any treaty. When they came to the chiefs of Atitlan they were driven away by arrow-shots; and they retreated to Utatlan, when the king warned them to leave his capital that very day, and the country within twenty suns. This is the only record we have of any communication between Mexico and Guatemala before the famous march of Cortez.

In Utatlan Vahxaki-Caam and Quicab were kings when a Cakchiquel wizard, who some say was the king's son, came by night to the palaces of Utatlan and yelled and shouted so that the poor kings could not sleep; and as bootjacks were not yet invented, they had to listen to this ancient tomcat, who, when they put their heads out of the window, called them *mama-caixon* and other dreadfully opprobrious epithets. Next day the king called together all his wizards and offered large rewards for the capture of the nocturnal enemy. A Quiché wizard undertook the task, and chased the foreigner a long time, both jumping from mountain to mountain. At last he captured the Cakchiquel and brought him before the

royalty he had insulted. When asked if he had made the horrid noises at night, he replied that he had. “Then,” said the king, “you shall see what a festival we will make with you.” Then the nobles began a war-dance to celebrate the capture of that wizard, and transforming themselves into eagles, lions, and tigers, they danced around and clawed the poor Indio. All things being ready for his execution, he turned to the king and all the others, crying, “Wait a bit, until you hear what I wish to say to you. Know that the time is at hand when you will despair at the calamities which are to come upon you, and that *mama-caixon* must die; and know that some men clothed—not naked like you—from head to foot, and armed, men terrible and cruel, sons of Teja, will come, perhaps to-morrow, perhaps the next day, and will destroy all these palaces, and will make them dwellings for the owls and wildcats, and all the grandeur of this court shall pass away.” When he had spoken they sacrificed him, and paid little attention to his prophecy. Warring here and there, suffering defeat seldom, but troubled with diseases and epidemics, a plague came at last which nearly depopulated the city of Tecpan, and was especially fatal among the nobility, both kings dying. So great was the mortality that there was not time to bury the dead, and they were often left to the vultures.

When this scourge had passed, Achi-Balam and Belehé-Qat were called to the throne, and during their reign came the news of the terrible work of the Spaniards in Mexico. These young kings decided to send an embassy to the mighty chief of the invaders, begging his protection and aid against their enemies. We have to-day the letter of Cortez to Charles V., dated in Mexico, Oct. 15, 1524, describing this embassy of Guatemalans to surrender their country

and countrymen to the foreign devils who had destroyed their neighbors beyond the forests of the North. One almost feels that these wretched Cakchiquels deserved the miseries they brought upon themselves. Whether by any combination the tribes of Central America could have resisted the invaders, as did the Lacandones, no man can say. Probably their time had come, and no human or divine influence could change the event; but it is sad to see these many tribes, while the storm was gathering over their devoted heads, fighting among themselves in the most headstrong way: and so they fought until the coming of Pedro Alvarado. Guatemala held three hostile camps,—the Quichés at Utatlan; the Cakchiquels at Iximché or Tecpan Quauhtemalan; and the Tzutohiles at Atitlan.

December 6, 1523, the greatest general and most trusted friend of Cortez, Pedro de Alvarado, departed from the City of Mexico at the head of three hundred infantry (of whom one hundred and thirty were archers and gunners), and one hundred and twenty cavalry. He took four small cannon, in which were used stone balls, forty reserve horses, and his native allies were two hundred Tlaxcaltecas and one hundred Mexicans, besides a large number of *tlamenes* to carry the baggage. With this warlike array went two ministers of the Prince of Peace, Juan Godinez and Juan Diaz. The conquest of Guatemala was the end to be attained.

Alvarado marched south to Soconusco, and here met his first opponents. Unlike the contemptible Cakchiquels, the brave Quichés would make no terms with the invaders of their country, and as the Spaniards approached they hastened to join the men of Soconusco, and near Tonalá fought their first

battle with the white men. The Indios were utterly routed; but they fell back and made preparations for a greater struggle. Oxib-Queh was then Ahau-Ahpop of the Quichés, and his fellow-king or Ahpop-Camhá was Beleheb-Tzi; Tecum-Umam and Tepepul were the other principal chiefs. Tecum, as commander-in-chief of the army, designated Chuvi-Megena (Totonicapan) as the rendezvous of the Quiché forces. His army was immense (the annalists make it equal to the enrolled army of Germany!); but no one knows the exact number of naked soldiers he brought together.

After the victory at Tonalá, Alvarado marched inland towards Zapotitlan, the capital of Suchitepequez; and as he approached the city, sent some spies he had captured in the mountains with friendly messages to their chiefs. No answer, either good or bad, was returned, but a battle was fought on the Rio Tilapa, and again the Spaniards were victorious. Some of the inhabitants of Zapotitlan called from a distance to the invaders and invited them to come into the city; but Alvarado preferred to choose his own time, and the Indios again attacked him. Desperately fighting, they were constantly driven back, and the invaders trampled over their bodies even through the streets of the city and for half a league beyond, where the battle ended; and Alvarado returned to the city and camped in the market-place. More like hungry locusts than human beings, these land-pirates went on destroying army after army in a way that is painful to read about. On the plains of the River Olintepec so great was the slaughter of the Indios that the stream was colored for days with their blood. The loss of the Spaniards was only a few men and horses wounded.

Tzakahá was occupied without resistance, and the Mexican allies changed the name to Quezaltenango. Under a canopy of branches the ambassadors of the Prince of Peace offered sacrifice to the god of battles. Here at the first mass celebrated in Guatemala these blood-stained murderers knelt. No wonder that the priests have in their turn been driven from the country!

Xelahuh was found deserted, and here Alvarado rested three days to remove the rusting blood from his arms. Then came the news that another Quiché army (Alvarado writes to Cortez that it was composed of twelve thousand men from Utatlan and countless numbers from the neighboring towns) was approaching; and the Spaniards marched out to meet them on the magnificent plain between Quezaltenango and Totonicapan. This was the decisive battle, and marvellous are the Indian legends gathering around it. Over the head of Tecum, the Quiché commander, hovered a gigantic quetzal (the *nagual* of the chief), who savagely attacked the Spanish general. At last the Spanish lance killed the bird, and at the same moment the unfortunate Tecum fell lifeless at the feet of the Conquistador.

In his report to Cortez, Alvarado writes: “That day I killed and captured many people, many of them captains and persons of rank.”

All the prisoners taken in this war (both men and women) were branded on the cheek and thigh and sold as slaves at public auction, a fifth of their price belonging to the King of Spain.

The last army of the noble Quichés being destroyed, and their utmost efforts being unavailing to turn aside the destroyers of their country, it is not difficult to imagine the terror in Utatlan or the

hurried counsels of the two kings. In desperation they decided to sacrifice their city, if they might destroy at the same time these invincible Spaniards. The enemy was to be lured within the walls, and the only two means of entrance closed, and then the thatched and wooden roofs were to be fired, and so the imprisoned enemy destroyed. It was an effective plan, and might have been successful with a less wary general than Alvarado. He discovered the plot after he had entered Utatlan; but feigning friendship, he managed to get out of the city on the plea that his horses could not bear the paved streets, and the next morning begged the honor of a visit from the two kings. Oxib-Queh and Beleheb-Tzi came with a considerable retinue of nobles, and Alvarado received them with pretended friendship. When all the preparations were made, a party of soldiers loaded the guests with chains, and then their host bitterly reproached them (the poor heathen) for their plot. By a court-martial they were condemned to be burned alive. This horrible sentence was carried out, and during Holy Week, April, 1524, the last legitimate sovereigns of the most powerful nation in Central America perished in the flames. Bishop Marroquin named the city that succeeded Utatlan, Santa Cruz (holy cross), because the Indian capital was captured on Good Friday!

Alvarado wrote to Cortez: “That I might bring them to the service of His Majesty, I determined to burn the lords; ... and for the well-being and peace of this land I burned them (*yo los quemé*), and commanded their city to be burned and razed to its foundations.”

The scattered Quichés, driven to fury by the awful death of their beloved monarchs, fought to the death;

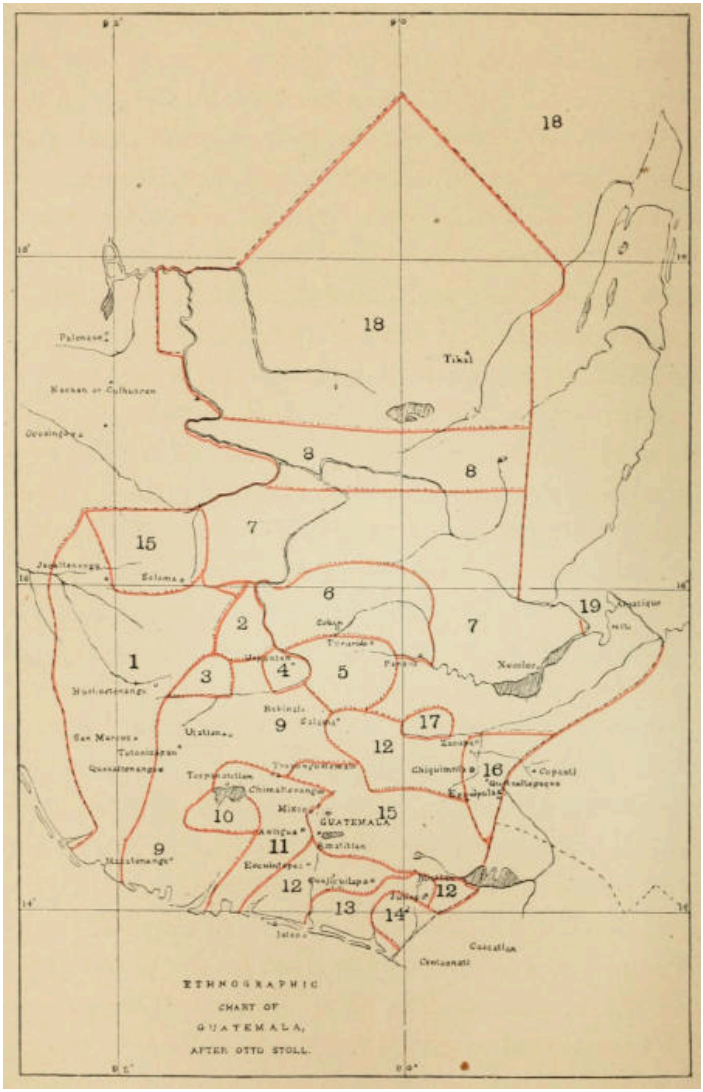
and Alvarado was obliged to despatch messengers to Iximché to demand aid from his Cakchiquel allies, who hastened to send four thousand warriors to crush the bleeding remains of their ancient rivals.

The reception of the Spaniards at Iximché, the fights with the Tzutohiles, and the destruction of Atitlan, seem tame enough after the martyrdom of the Quichés, the sole defenders of their country. Henceforth the rebellions and battles are only outbursts against individual oppression. Many tribes followed the Cakchiquel example, and submitted without a struggle. Itzcuintlan (Escuintla) refused; but the Spaniards entered the city on a stormy night and murdered most of the inhabitants. Alvarado marched to San Salvador in spite of considerable unorganized opposition, and returned to Iximché, where he founded on the 25th of July the capital of the kingdom of Guatemala, claiming as patron Santiago (Saint James) of Spain. This was afterwards removed to Almolonga (Ciudad Vieja).

While in Iximché, Alvarado showed his foolish Indian allies what his true character was. One of the chiefs of the Cakchiquels had just espoused the beautiful princess Xuchil; but the lustful eye of the Conquistador had fallen on her, and he sent for her on the pretext that he wished to consult her about the people to the southward whom he intended to subdue. The husband in well-grounded alarm begged the general, with tears in his eyes, to return his beloved wife, offering with his petition a rich present of gold and ornaments. “But the proud and hard-hearted Spanish knight, who thought he did honor by his passion for the bride of a Cakchiquel prince, as he had done in Mexico with the daughter of one of the lords of Tlaxcala, accepted the present, but

refused with disdain the prince's petition." Again Alvarado called upon the kings of Iximché, Belehé-Qat and Cahí-Ymox, to bring him all the gold and silver they possessed, even to the royal insignia; and to emphasize his demand he snatched from the wretched kings their earrings, so that they shed tears at the physical pain. "If within five days all your gold is not here, woe be unto you! I know well my heart!" The kings, advised by a native priest, decided to leave the city with their wives and children, and they resolutely refused to return when Alvarado sent friendly messages and promises to them. Then the Spaniards began a war of extermination and slavery against the Cakchiquels, and the Quichés and Tzutohiles now took the side of the invaders against their hereditary enemies. All this destruction and misery had come upon Guatemala in one year, 1524. When the tribes were conquered, one by one, their sufferings only commenced; for so terrible was the slavery to which the Indian population of Guatemala was reduced that death was welcomed by the sufferers, and the Quiché nobles refused to rear children to serve their conquerors.

Transcriber's Note: image is clickable for larger version



ETHNOGRAPHIC CHART OF GUATEMALA, AFTER OTTO STOLL.

I do not care to follow the history of Guatemala under Spanish rule; it would be no pleasure

excursion through the sloughs of deceit and over mountains of tyranny. Priests and soldiers vied with each other in iniquity; and the Indios, then as now, seem to have been the most moral part of the population.

In closing this long chapter on the early people of the kingdom, I would call the attention of my readers to the present Indians of Guatemala and their relationship, according to Dr. Otto Stoll. This learned ethnologist classifies the Indios mainly by language rather than by physical data, and I am myself sceptical of the value of linguistic distinctions. I know Bengalis who speak English most perfectly, and I can well imagine their losing their mother-tongue from disuse or disassociation with their brethren; but the Bengali does not thus become an Anglo-Saxon. I believe very little stress should be put on lingual relationships; and also do I protest against any system of classification founded on the cranium alone: the whole body, outer integuments as well as osseous frame, must be called in witness; and one day perhaps the study of human proportions and physical peculiarities will result in a classification in which language plays no part, or at least a very subsidiary one. In the mean time let us take the chart of the Swiss professor as the best thing we have at present. The nineteen tribes or families Dr. Stoll names as follows, and their location is indicated by the numbers on the chart:—

1. Mam.
2. Ixil.
3. Aguacateca.
4. Uspanteca.

5. Poconchi.
6. Quekchi.
7. Chol.
8. Mopan.
9. Quiché.
10. Tzutohil.
11. Cakchiquel.
12. Pipil.
13. Sinca.
14. Pupuluca.
15. Pokomam.
16. Chorti.
17. Alaguilac.
18. Maya.
19. Carib.

Of the Aztec stem, only the Pipiles (12) are found in Guatemala. They are probably the descendants of the Tultecs, who were subdued by the Olmecs. Of the Mije stem are the small tribe of Pupulucas (14). The Caribbean stem is represented on the coast by the Caribs (19); and of these so many differing accounts have been given that I am tempted to give a fuller description.



Carib Woman.

When the West Indies were discovered, they were peopled by several races; but among them none were so formidable as the inhabitants of the southern islands of that sea, now called, from their supposed name, Caribbean. The Caribs dwelt also in the valley of the Orinoco; but seldom chose their home far from

the sea. They were understood to have the habit of eating their fellow-men; and it is from a corruption of Caribal that we have the opprobrious term “cannibal.” Whether they did limit their diet to the orthodox fare or not, is by no means clear; for the Spanish conquerors did not scruple to indict, condemn, and put to death the innocent natives who opposed them,—and no stouter opponents than the Caribs did they find. Two distinct tribes are generally included under the name,—the black Caribs, and the yellow: the latter with straight black hair; but the former are no doubt the mixed breed of the true Carib (who was generally at war with the European intruder) and the African slaves who escaped to the protection of the aborigines from their tyrannical masters. In 1796 England removed these troublesome people from St. Vincent to Roatan,—one of the Bay Islands off the coast of Honduras, whence they gradually emigrated to the mainland; and now their villages are found from Belize to Cape Gracios á Dios.



A GROUP OF CARIB CHILDREN.

All along this coast they are of distinct and uniform character, to the casual observer differing little from the negro type; of good stature, firm, muscular build, and powerful limbs,—women as well as men. To one who is used to study the physical character of men, the outward resemblance to the negro is less marked. The hair is woolly; but the nose is less flattened, the mouth not so wide, nor are the lips so thick. The shoulders are broad, but so are the hips; and the narrow pelvis of the African is generally wanting. The fingers have large joints, and from the last all the fingers, but especially the thumb, taper sharply to the end. The heel is not so projecting, and the feet are very broad. Other differences are of interest to the student of the human form rather than to the public.

Almost all speak some English,—seldom using the baby-talk of the negro, but not always conforming to the correct idiom; more familiar still with Spanish, they always use their own language in conversation with each other. Several grammars and vocabularies of the dialects spoken by these islanders and by their namesakes in South America have been published (as may be seen in the list of books given in the Appendix), but I have not studied this language enough to learn the difference, if any, between the speech of the yellow and the black tribes. The Caribbee has a disagreeable sound,—perhaps by contrast to the Spanish; but the syllables *ber* and *bub* are frequent, and the enunciation is exceedingly rapid, making it very difficult for an alien to catch the words. Add to this the curious fact that the men and women speak a distinct language, and the obstacles a learner meets are important. To illustrate, here are a few of the man and woman words:—

	Man.	Woman.
Father	yumaan	nucuxili
Mother	ixanum	nucuxum
Son	macu, imulu	nirajö
Daughter	niananti	nirajö
House	tubana	tujonoco
Earth	nonum	cati
Brother	ibuguia	(?)

The traveller becomes familiar with such expressions as *Igarybai*, "let it alone;" *Buraba duna nu*, "bring me water;" *Kimoi*, "let us go;" *Fagai*, "paddle;" *Mawèr*, "O Lord!" *Ih hj*, "I don't know,"—pronounced with a contemptuous nasal twang that would outdo the veriest Yankee.



TWO CARIB BOYS.

Talkative beyond measure, it is difficult to quiet them in camp at night, unless they have had a hard day's work. Good-natured when well treated, they have a very good opinion of themselves, and their self-love is easily disturbed. Superstitious to an

extreme, they are not in public very religious; but there are strange stories told of human sacrifices in which a child was the victim. I have noticed that they put a rude cross on the window and door openings of an unfinished house to keep out the devils. When becalmed in a dory with Caribs, I have often heard the prayer:—

"*Sopla, San Antonio, barba de oro cachimba de plata!*

Blow, Saint Antony, with golden beard and silver pipe!"

And if the saint did not blow when asked repeatedly, the next proceeding was to make a cross of sticks and tow it astern; this last performance, like reading the Lord's Prayer backwards, usually raised a breeze. The worship of Mafia (the devil) I believe is general; but they do not like to talk about it. Caribs are less musical than any of the black races I have met; but they are fond of noisy drums, and will dance until utterly exhausted. Some of their dances last two days.



Indian Women, Pocomam Tribe.

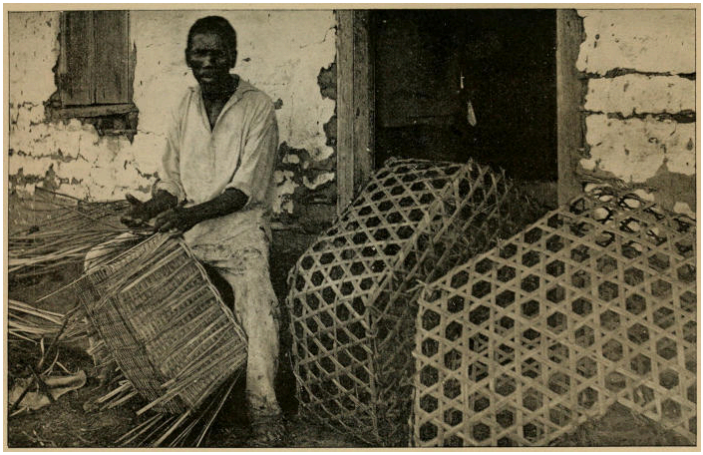
Of all the languages of Central America, no one has been more studied than the Maya. It is the language of Yucatan, and there many foreigners both speak and read it. In Guatemala it is the parent tongue of the great majority of the tribes, including the Quichés, Cakchiquels, and Tzutohiles,—those long-time enemies. The reader may see by the table of words I borrow from Dr. Berendt the similarity of certain common words in sixteen of these dialects.

COMPARISON OF CERTAIN WORDS IN THE MAYA DIALECTS.

	Man.	Woman.	Father.	Mother.	Wa
Huasteca	iník	uxúm	pailóm pap	mim	ja
Maya	xib, xiblál	ch'uplál	yum	na	jaá
Chontal	vuiník	ixík	pap	naá	jaá
Tzental	vuiník	antz	tat	nan	jaá
Tzotzil	vuiník	antz	tot	me	joó
Chañabal	vuiník	ixúk	tat	nan	ja
Chol	vuiník	ixík	tiát	niá	jaá
Quekchi	vuínk	ixk	yuvuá	na	ja
Pokomchi	vinák	ixók	ajáu	tut	jotíc,
Pokomam	vinák	ixk'ón	tat	nan, tut	ja
Cakchiquel	achí, vinák	ixók	tatá	té, nan	ya
Quiché	vinák	ixók	tat	nan, chuch	ja, jo
Uspanteca	vinák	ixók	aj	xchuch	ja
Ixil	ná	ixó	bal	chuch	a
Aguacateca	yáje, yaátz	xnan	ta	chu	a
Mam	ca, íchang	ching, xuj	mán	chúy	a

The Lacandones, those unconquered Indios of the Usumacinta, speak a dialect cognate with that spoken in Yucatan, Campeche, and the sacred island Cozumel; and what gives additional interest to the Maya language is the fact that all the inscribed monuments of Tikal, Copan, Quirigua, and Usumacinta belong to this race, and if interpreted, this is probably the key.

The Quekchi language (6) is spoken by the Indios of Coban Cahabon, Senajú, and adjoining parts of Alta Verapaz, while close at hand (San Cristobal, Tactic, Tucurú, La Tinta, and Teleman) we have the Poconchi form. Externally both tribes are alike, although the Quekchis perhaps dress rather better.



CARIB PLAITING A PETACA.

The extant literature of the Quichés has been freely consulted in the preparation of this chapter. Would my readers like to see what the original language of the “Popul Vuh” is like?

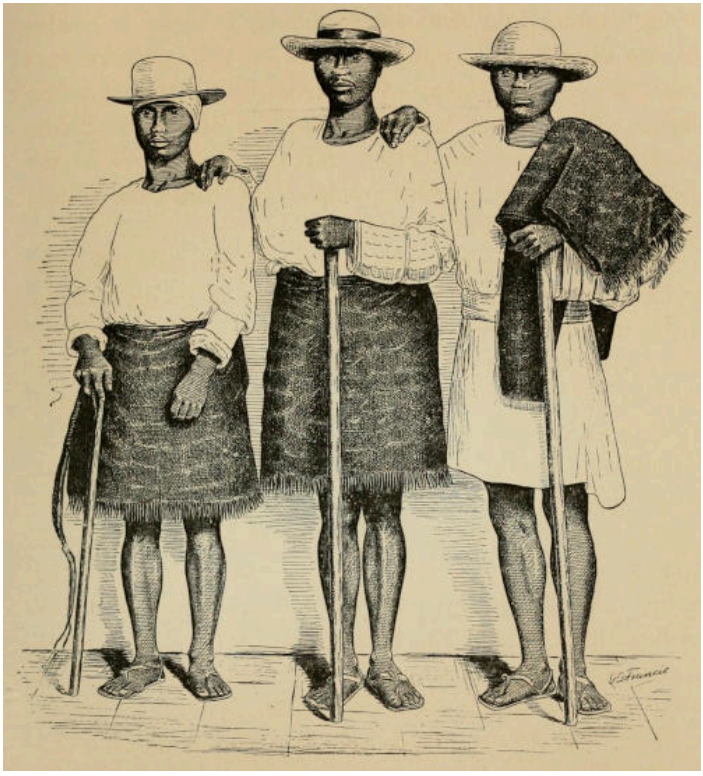
Are u xe oher tzih varal Quichbe u bi.	This is the beginning of the story of those who were formerly in the land that is called Quiché.
Varal xchekatzibah, xchikatiqiba vi oher tzih, u tiqaribal, u xenabal puch ronohel xban pa ’tinamit Quiche, r’amag Quiche vinak.	There begins and commences the knowledge of the earlier time, the origin and beginning of all done in the Quiché state in the home of Quiché men.

Uspantán has a little dialect all to itself (4). Of the

Cakchiquel language we have a most interesting remnant in the "Cakchiquel Manuscript," next in importance to the "Popul Vuh." In it the account of the creation is copied, as was natural, from the Quiché narrative; but the main portion of the work is a history of the revolution which led to the departure from Utatlan and the occupation of Iximché, and also of the advent of the Spaniards and the subsequent events until the establishment of Christianity as the State religion. The author was the grandson of the king who died of the pest in 1519; and his story goes to the year 1582, when another member of the same family continues it to 1597.

The Tzutohiles (10), who, it will be remembered, were a fighting tribe on the shores of the Lago de Atitlan, are still of the same spirit; and when Mr. Maudslay attempted to photograph them, the women shook their fists in his face. The unwillingness to be photographed I also found among the Quiché women (old ones) of Sacapulas; but a word from the comandante subdued their opposition.

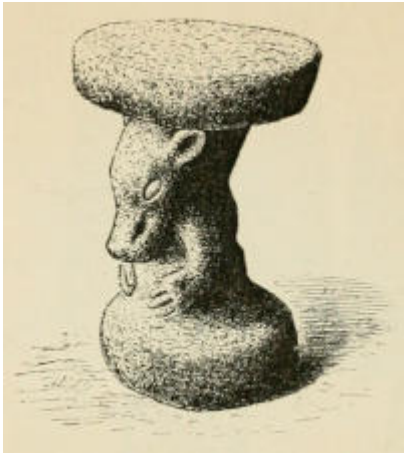
The Ixils (1) dwell in the Sierras west of Coban, and the Mames (2) are found at San Marcos, Chiantla, and Huehuetenango, all westward to Soconusco and south to Ocós. The Aguacateca (3) occupies a small space north of Utatlan, and the vocabulary given by Stoll differs entirely from that of Dr. Berendt's already quoted. Chorti (16) is spoken at Chiquimula and Zacapa, and in the opinion of some is the language of the sculptors of the glyphs at Copan. Sinca (13) and Alaguilac (17) are almost unknown, and Stoll cannot classify them.



Mozos de Cargo, Quichó.

The personality of these tribes is wholly absent from Dr. Stoll's learned treatise; and my own knowledge of their appearance and way of thought is too limited to lead me to venture to fill the void. I have noticed what every one else speaks of,—the sober bearing of the Guatemaltecan Indios; but I have often seen the face of my mozo de cargo brighten as I greeted him, and I have been even led to think that his mourning expression is worn much as civilized ladies wear their black,—to save themselves trouble. It is laid aside in the family, or with a friend they can trust. Many of the men are

well formed, although small, and their faces are often very attractive. I believe them to be neater in their persons and garb than the ladino population.



Carved stone Seat (Museo Nacional).

CHAPTER X.
THE REPUBLIC OF GUATEMALA.



Arms of Guatemala.

For almost three centuries Spain governed Central America (1524-1821) by the Audiencia Real. Every act of oppression that could be exercised upon the Indios was invented by the foreign rulers, and the native population was greatly reduced by this mismanagement; but such a course always reacts most terribly upon the perpetrators. The thirst for wealth that brought the foreigners to these shores

pursued them still, and the brave resistance to wrongs unlimited, that the Spaniards themselves chronicle, does not seem to have awakened that respect in the bosoms of the Conquistadores that it now rouses in the heart of every generous student of the past. The Indios were lawful prey, it was "spoiling the Egyptians;" and although Las Casas and some of the missionaries tried faithfully to protect their flock, and although the King of Spain made decrees, the powers of evil seemed to have their own way in this distant colony. We cannot but admire the undoubted courage and indifference to personal hardship exhibited by the Conquistadores; but that must not blind us to the fact that they were little better than freebooters in their treatment of the American nations they subdued, and that their policy, so far as they had any, was of the most selfish and narrow kind. Jealousy of other nations, especially of England, who was now beginning to try her hand in ruling the sea, although in a rather irregular way, led to the establishment of all the important cities in the mountain region of the interior, where they might well escape the notice of other nations. The natural walls that Nature had provided were made very useful to their utmost extent; the ports were but conveniences to help the invaders to supplies from the mother-country and afford a necessary means for the exportation of their ill-gotten gains, and general commerce was discouraged in every way. The buccaneers helped to discourage the growth of ports, but the Home Government did quite as much in this direction. The atrocious system of *encomiendas*, by which the native population was reduced to an almost hopeless slavery, was permitted, if not encouraged, by the Church, and no attempt was ever made to develop

the country on a basis of improvement in the Indian population; and the animal, vegetable, and mineral wealth of Guatemala were treated much in the same way,—a prey for the present robber. The Indios were all subdued, except the Lacandones far on the northern frontier, who were too poor to pay for subjugation; and the iniquitous policy of selfishness began to bear fruit. Unlimited power and immunity in the hands of the clergy begot intolerance. The shepherds became the wolves, and not only devoured their own flocks, but the entire country as well. Monopolies, corruption, oppression grew like true tropical vegetation, until the air became too close for healthful life; and then came the fermentation. Uprisings of the Indios had occurred before the death of Alvarado (1541),—for example, the brave attempt of the Cacique Lempira in Honduras; but these rebellions were all crushed by the iron hand of the Adelantado and by his generals. Now came the low murmur of a rising tempest over the land, and the winds were blowing from a different quarter of the heavens. Now the ruling caste was uneasy, and it was about to reap the inevitable harvest of the wind it had sowed.

Not in the province of Guatemala, not at the seat of the Audiencia Real, but on that disturbed strip of land along the Pacific coast of Nicaragua and San Salvador, where earthquakes are on the most terrific scale, and volcanic vents bristle threateningly, appeared the first forcible remonstrances against this aged and encrusted tyranny. In 1811 there were risings, little *pronunciamentos*; but there was no combination to insure success. The false system of government taught a distrust of others; selfishness permeated individual character as well as the nation at large; and no man could put confidence in his

neighbor. No leader appeared to unite the discordant elements, the evolution of a free state was very slow, and at last was as much owing to the supineness of Spain as to any forceful act on the part of the provinces. We have here no war of freedom, no Washington, no Bolivar. Sporadic murmurs were heard now and again; they came to the ears of the people and set a few men to thinking; the number of these thinkers grew, until in 1821 the then representative of Spain, Gavino Gainza, joined the rebels,—much as a disappointed politician of the present day leaves his party for the camp of its opponents,—and independence was solemnly proclaimed, September 15, in Guatemala. Spain seems to have acquiesced in an act which deprived her of her fair American colonies; but it may be supposed that her mismanagement had left little value in the possession.

Three centuries of abasement had been a most inopportune school for the freedom of a republic, and one cannot be surprised that the change was no easy one, or that the results have not, even after two generations, been all that the patriots among these first rebels may have wished. Subjectively, “Be thou fed” is very easy; but objectively the result seldom meets the command. Slavery was abolished forty years before the great Republic of the North dared to do that right; but this eminently proper step was very embarrassing, for not only were there no means left for the forced repair of roads, bridges, and other means of intercourse, that in a tropical country need constant vigilance, but the commerce between town and town fell off, and the little traffic that had led a struggling existence for some years with Spain and other European countries now died out entirely, and the revenues of the State were affected with an

atrophy that crippled every attempt of the Government to improve the internal communications of the country. The clergy, who had perhaps made the freest use of forced labor, in covering the land with elaborate churches and convents that all the revenues of the Government of the present day could hardly keep in repair, felt aggrieved and uneasy. All was in transition, and there were few wise men to guide the counsels. The stream was turbulent, and not easily kept within its proper channel. Is it wonderful that round blocks should be found in square holes under such circumstances; or that the political equilibrium, all unstable, should turn to this signal disturbance or that, without much reason?

There were two parties, around which rallied opposing elements,—the Conservative, Central, or Servile, as it was variously called, and the Federal, Liberal, or Democratic. To the former belonged the leading families, who possessed certain monopolies and feared to lose them; the clergy, who with these few families held themselves for an aristocracy; and a few of the lower classes, who from personal or religious feelings were satisfied with the existing order of things: and all these bitterly resisted any innovation, especially any attack upon the privileges of the Church. To the Liberals flocked all those who did not enjoy monopolies, and who could not be worse off under any change; but there came to this standard also men of intellect, who saw the dangers which threatened their country, and who rejected the superstition into which the local Church had fallen, but who in their eagerness to hold up the example of the United States of the North to their newly emancipated countrymen, forgot the radical difference between the Anglo-Saxon and Spanish stock and training. Then came in the feeling of race-

prejudice; and when one remembers that three quarters of the population was Indian, and that of the other quarter was composed the entire ruling class, it will perhaps be a matter of surprise that more evil did not come from this threatening condition of affairs. If the Indios of Guatemala had not been the most peaceable and law-abiding of their kind known to history, they might have improved the opportunity to repay all the miseries inflicted upon their ancestors. As it happened, they could at least be conscious of their power.

With no fixed policy, the ancient States of the kingdom of Guatemala cut adrift from Spain. At one time all, except San Salvador, entertained the idea of union with the new Empire of Mexico under Iturbide, but they escaped that complication by the early collapse of the Mexican throne; and at last, on the 1st of April, 1823, representatives of the States met in the City of Guatemala, and the Asamblea Nacional Constituyente, after long debates and many propositions, in which, as might be supposed, the Church party had no unimportant influence, a Federal Constitution was proclaimed on Nov. 24, 1824.

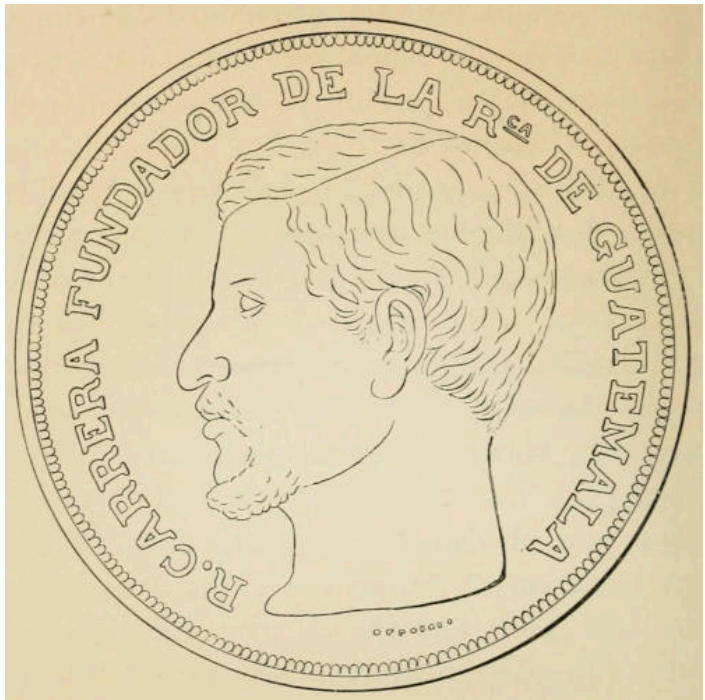
Three years later the Vice-President, Flores, was murdered in Quezaltenango by a mob of female furies instigated, it is claimed, by the Church party, and his body was stripped and mutilated by the fiend-like women. This was done in the church as the wretched man clung to the altar, and it was done in the name of religion. The consequence immediately following was an absolute reign of religious fanaticism. San Salvador, however, sent an army to restore order, and on March 16, 1827, attacked the capital; but these troops of the Liberal party were

driven back, and for two years a barren warfare was kept up. In 1829 General Francisco Morazan led the Salvadoreñan army to Guatemala; and now success attended the Liberals. After a battle lasting three days they entered Guatemala City in triumph, banished the leaders of the Central party, and suppressed the convents. In 1831 Morazan was elected President of the Republic or Confederacy, and for ten years his party held the government. It is not easy for a foreigner to get trustworthy information of the true value of Morazan's administration; but while the man seems to have been patriotic and of excellent private character, he was not strong enough to control the warring elements around him. The Church was his bitter enemy; and while it long endured the low estate to which the party in power had reduced it, there was no lack of grumbling, nor of even more active endeavors to find a champion.

In the mean time an Indio of low birth[44] and wholly uneducated, but of great courage, had come into prominence as a leader of bands of marauding Indios. Rafael Carrera, young as he was, saw his advantage in the disturbed condition of his country, and after various defeats at the hands of the President, at last drove Morazan from Guatemala, and the Confederation came to an end (1839).

Carrera favored the Church party, but had not the slightest intention of letting the Church rule him. He knew how to use it, and the clergy generally submitted gracefully. In all previous revolutions the defeated party had been banished, and so the State was kept unanimous—a condition that could not obtain now, because neither party had much real power left after the constant struggles of the past few

years. It was while our countryman John L. Stephens, whose fascinating account of his travels will always be a classic, was on a diplomatic mission to Central America that young Carrera was gathering his power, and it is to this distinguished traveller that most of the information about Carrera is due. Carrera, *Fundador de la República de Guatemala* (Founder of the Republic), is the title he claimed on the coinage of Guatemala during his administration; and after a long reign—the word is used intentionally—he was able to designate his successor and die in his bed, while his chief antagonist, Morazan, after a most persevering struggle for the union of Central America, was shot by his ungrateful countrymen. The tomb of Carrera is in the metropolitan church in Guatemala City.



Rafael Carrera.

On the death of Carrera, in 1865, Don Vincente Cerna succeeded to the Presidency; but he did not possess the power over the Indios that Carrera held, and before his term of office had half passed, disturbances broke out on the northern frontier, where a man named Barrios had collected a gang of outlaws. This insurrection was suppressed, and Barrios executed; he however left a successor in the person of Serapio Cruz, a very corpulent man, but for all that a typical brigand, who for some time waged a guerilla war from his mountain retreats, capturing the distilleries of aguardiente (then a Government monopoly), and destroying what he could not carry away. Joined to this enemy on the outskirts of the republic was a no-less disturbing element in the legislature in the person of Don Miguel Garcia Granados, who was most active in attacking the Government. As the Presidential term of Cerna ended, a rival in the political field, General Victor Zavala, seemed likely to be elected; but by a close vote Cerna was re-elected. In 1869 a loan was negotiated in London which enabled the Government to pay its most pressing debts, and quiet was apparently secured. All this time, however, the insurgent Cruz was strengthening his band in the mountains, where he was joined by a man destined to hold the chief place in Guatemala, General J. Rufino Barrios; and in December, 1869, the rebel army approached the capital. The city was in a most excited state, expecting pillage if not destruction, when the unexpected news came that the *head* of Cruz would soon be in the city. It was true; a party of Indios had attacked and defeated the chief, and now brought his bleeding head to the President. This

disagreeable trophy was photographed, and prints were sold in the shops for fifty cents. The rebellion was over for the time, and Barrios fled to Mexico. President Cerna was very lenient to his enemies, and Granados was merely banished, and put under ten thousand dollars' bond not to return to Guatemala.

Banished men are always dangerous, and Granados was no exception. Seeing his opportunity in some dissatisfaction with the governmental policy, he invaded Guatemala, and was at once joined by General Barrios. The march from Mexican territory was almost a triumphal procession, and on the plain between Quezaltenango and Totonicapan (the Esdraelon of Guatemala) the decisive battle was fought. Cerna could not trust his generals, and so took the field in person. For a time the battle was with him; but Barrios brought up his troops in good time, and the national army had to give way. President Cerna rallied his forces at Chimaltenango, only to be again defeated; and after making a final stand at San Lucas, a small village between Antigua and Mixco, fled to Chiquimula, where he advised his followers to submit to the conquerors, while he went over into Honduras.

On the 30th of June the "Army of Liberators" entered the capital, and Granados was proclaimed President *pro tempore*. The new President found an empty treasury, and called upon the merchants for a loan. The authorities were very careful to say that this was not a forced loan; but the method was very much of that character, for a list was made out of all the merchants in the city, and the proportion each one was thought capable of paying set against his name. The "subscription paper" was then sent around, and few dared to refuse. No wonder that

Central Americans do not wish to be thought rich or prosperous! Granados was nominally President; but no one doubted that the man soon to become his successor was in reality acting in that capacity even then, although it was convenient for him to have Granados arrange the finances as well as the disturbed politics. Several reforms were proclaimed, as freedom of the press, and the abolition of the monopoly of distilling aguardiente. Before three months had passed, the clergy began to make trouble, and in September, 1872, the Archbishop and the entire Order of Jesuits were banished the republic for inciting insurrection at Santa Rosa. The San Franciscans, Capucins, and Dominicans were expelled the following year. This was briefly the story of the beginning of the reign of Barrios.

On June 30, 1871, General J. Rufino Barrios was elected President of the independent republic that Carrera claimed to have founded; and from that date Guatemala began to make real progress. His iron will determined that Guatemala should indeed be chief of all the Central American States, so that when the time came to renew the union of all the States,—a cherished scheme of Barrios,—there could be no question of her leadership. He so far succeeded that his country has undoubtedly made more material progress in the ten years of his administration than the other Central American Republics have made in half a century.

Without going into even a brief history of the politics of the republic under Barrios, certain important acts must be mentioned, such as the adoption of a Constitution, Dec. 9, 1879, the expulsion of the Jesuits, the confiscation of much Church property and its appropriation to the uses of

public education, as well as for hotels and government offices,—acts which have greatly advanced this once priest-ridden country. I would not have it thought that in speaking of the sequestration of the churches and monasteries I undervalue the offices of religion, or am at variance with the particular branch of the Church whose property was so treated. Guatemala needs more religion, not less; and could some of those pure and devoted priests of the Church of Rome whom I have rejoiced to meet in many a remote region, turn their energies to Central America, it would be well. It cannot, however, be too clearly stated that what was called the Church in these lands was a church for any other purpose than those truly religious men could approve. The evidences of corruption are too clear to admit a doubt that the clergy had ceased to do the people any good: they failed to do their duty, in their eager struggle for temporal power; and to-day the splendid churches they built are in ruins, or left to the ministrations of some itinerant priest. There are in Guatemala church edifices enough to contain the entire population, not a tenth part of which ever enters for worship, since the majority has been repelled rather than attracted by the unfaithful padres.

The legislative power is in the Asamblea Nacional of Guatemala, which convenes on the 1st of March annually; and its ordinary sessions last only two months, although it may continue in session another month if necessary. Owing to the adoption of a code, the republic is generally saved the “hayseed” law of the Northern legislatures and the “judge-made” law of the courts; and the work of the Asamblea is greatly lightened. The deputies who compose the Asamblea are elected on the basis of one for every

twenty thousand inhabitants, or for a fraction exceeding one half of that number. Each is elected for a term of four years; but the terms are so arranged that one half of the deputies is changed every two years. To these deputies the various Secretaries of State make formal reports regarding the matters usually contained in the President's Message to the Congress of the United States.

The President of Guatemala is elected by direct popular vote for the term of six years; and the Asamblea elects two persons to succeed him in turn, should he die or cease to act during the term for which he was elected. Profiting by the example of the older republic, Guatemala has rejected the farcical election still used in the North, where the people are supposed to elect electors to elect a President. The President appoints the following Secretaries of State:—

Relaciones Exteriores	Foreign Affairs.
Gobernacion i Justicia	Government and Justice.
Hacienda y Credito Publico	Treasury.
Guerra	War.
Fomento	Interior.
Instruccion Publica	Public Instruction.

These officials, with nine Counsellors, form the Council of State. For the purposes of government the republic is divided into twenty-three Departments, which are subdivided into sixty-one Districts. In these Districts are eleven cities (*ciudades*), thirty-two towns (*villas*), two hundred and ninety-nine villages (*pueblos*), fourteen hundred and six settlements

(*aldeas*), fifty-nine shore hamlets (*caserios litorales*), and three thousand seven hundred and forty-two interior hamlets (*caserios rurales*). The Departments, with their chief towns, are as follows:

Departments.	Chief Towns.	
Guatemala	Guatemala	(ciudad)
Amatitlan	Amatitlan	”
Escuintla	Escuintla	”
Sacatepequez	Antigua	”
Chimaltenango	Chimaltenango	(villa)
Sololà	Sololà	”
Totonicapan	Totonicapan	(ciudad)
Suchitepequez	Mazatenango	(villa)
Retalhuleu	Retalhuleu	”
Quezaltenango	Quezaltenango	(ciudad)
San Marcos	San Marcos	”
Huehuetenango	Huehuetenango	”
Quiché	Santa Cruz del Quiché	(villa)
Santa Rosa	Cuajinicuilapa	”
Jutiapa	Jutiapa	”
Jalapa	Jalapa	”
Chiquimula	Chiquimula	(ciudad)
Zacapa	Zacapa	(villa)
Izabal	Izabal	(puerto)
Livingston	Livingston	”
Baja Verapaz	Salamà	(ciudad)
Alta Verapaz	Coban	”
Peten	Sacluk	(pueblo)

The Executive appoints over each of these Departments a Jefe politico, or civil governor; and,

like the Secretaries of State, they must be men in whom he has implicit confidence. I may add that I met fifteen of these Jefes in the course of my journey, and found them, with two exceptions, men of character and intelligence, who would compare favorably with the governors of any of the Northern States; nor is this surprising, since they are appointed for their fitness, and not elected, as the United States governors often are, by a handful of irresponsible politicians who use popular votes simply to forward their private ends.

The organic law of Guatemala is the Civil, or Roman. The code is the result of careful study and adaptation to the needs of the country, and not the result of the tinkering of village Solons and the decisions of wiseacre judges, as is that heterogeneous mass, amorphous and illogical, the common law. Wherever especial needs have arisen, the code has been supplemented by *decretos* conforming to the system. The judiciary is appointed, and the members hold office for four years. It cannot be denied that some of the lower judges are not always men of considerable legal attainments; but it will be remembered that they do not usurp the legislative function, as is too often the case with judges under the common law.

Although the country is of the Roman Catholic form of religion, the Constitution allows full liberty of worship to other sects, within their respective churches, but forbids acts subversive of public order, or which might invalidate any civil or political obligations.[45] Notwithstanding this liberty, there is, I believe, but one Protestant congregation worshipping in the republic. It seems that the offices of religion are used most by women and by the

dying. Guatemala certainly cannot be called a religious community. The ruined churches, crumbling to dust and serving only as cemeteries of the dead, are monuments of a departed worship. Perhaps some day a purer religion may rebuild these fair temples and call within their walls all the Guatemaltecan children of the Great Father, to be refreshed with new life and courage.

In sad contrast with the religious life of Guatemala is the military vigor. It is difficult to obtain the exact statistics of the army, even in a time of peace; but it is said that the standing army numbers twenty-five hundred rank and file, with eighty jefes and two hundred and fifty-three other officers, while the militia, including all males not physically exempt, between the ages of eighteen and fifty, amounted in 1883 to 49,835 men. Under control of the War Department are the police, street-lighting, and the Polytechnic School. While it is possible that the army does not cost so much in proportion to the population as in some of the other Central American republics, it is nevertheless a terrible drain upon the resources of the people, apart from the bad moral effect of a military life, as seen in all history. May the time soon come when this beautiful republic shall throw off the incubus and devote all her energies to the development of her vast resources!

I pass to a more agreeable theme, the foundation-stone of a republic,—public instruction. On Dec. 13, 1879, President Barrios by decree established the present excellent system of compulsory and gratuitous elementary education. Under this in the primary schools are taught reading, Spanish, knowledge of objects, writing and linear drawing, geography, history, morals, and politeness.[46] For

those who wish to go beyond these elements, equally gratuitous facilities are afforded for learning Spanish grammar, book-keeping, elementary natural history, geography, and history of Central America, and some other branches (complementary).

In 1883 there were in Guatemala eight hundred and fifty primary schools, divided thus,—for boys, five hundred and forty; for girls, two hundred and thirty-six; mixed, sixteen; artisans' evening-schools, forty-seven; a Sunday-school for workmen, one also for women, and nine complementary schools. The attendance at these schools was 39,642 pupils, 27,974 males and 11,668 females; there were 735 male teachers, and 302 female teachers, while the cost was $241,499.14, or $6.09 each pupil. These schools, scattered all over the republic, meeting sometimes in old convents or other confiscated church buildings, sometimes in the cabildo or in buildings especially provided, are visited and inspected frequently by suitable persons appointed by Government, who do the duty laid upon them far more intelligently than most of the New England school-committee men,—I have had experience of both.

Teachers' institutes are held in three places each year in November, and the teachers are expected to attend and gather what new matter or interest may be provided for them. As the Government appoints the teachers, it is responsible; and I believe there is a general care among these teachers to keep well up to the requirements. Wisely, the schools are not overloaded, as are those in many Northern cities, with every conceivable subject; but the aim is to give every child the beginning of an elementary education, which he can, if circumstances permit,

greatly expand.

There are also fifty-five private schools, with 1,870 pupils costing $84,154, of which the Government pays $4,944.

The secondary instruction is given in several high schools or academies, of which the most important is the Instituto Nacional, Central de Hombres, in the City of Guatemala. The spacious buildings, formerly church property, well accommodate the physical and chemical laboratories, the meteorological observatory (the most complete in Central America), the zoölogical museum, mineral cabinet, and lecture-rooms, while within the courts is a good zoölogical garden. Besides the numerous class-rooms and offices are commodious dormitories provided with iron bedsteads and kept in very neat order. The corps of instruction consists of a director and twenty-seven professors, and in 1883 there were two hundred and fifty-three boarders, and one hundred and thirty day pupils, with twenty-three pupils in the normal department, and eleven free pupils. The day-pupils pay a matriculation fee of $10 annually, and $3 for an examination in each course. The institute costs $19,839.00, or $180.75 for each boarder, and $105.30 for each day-pupil. I have examined the work of the pupils, and found it very creditable, quite equal in many respects to that of the boys in the Latin and high schools of Boston. The girls are not neglected, although their instruction does not proceed to the extravagant lengths common in the eastern United States and in England, where the endeavor is made to train the female intellect to the standard of the male, and so wholly unfit for the privileges of matrimony and maternity the unfortunate girls who are subjected to such training.

The Instituto de Belen, Central de Señoritas, has a faculty of one preceptress and ten female teachers in charge of one hundred and twelve pupils, costing the nation $78,000. This school occupies an extensive building, with suitable cabinets and a gymnasium. A kindergarten is attached to this school.

In Chiquimula is the Instituto de Oriente, with one director, six professors, and thirty-three boys, nine boarders, and fourteen day-pupils. More important than this is the Instituto de Occidente, in Quezaltenango, with a director, twenty-two professors, and two hundred and twenty-one pupils. Cabinets of minerals and other natural objects, a chemical laboratory and a meteorological observatory, help in the instruction. In the same city is a similar school for girls, with a preceptress (*directora*), eleven *professoras*, and eighty-two pupils.

Professional instruction, which in the United States of the North is not deemed a part of the system of free public education, is here undertaken by the Government; and four faculties are established to teach law (*derecho y notariado*), medicine and pharmacy, engineering, and philosophy and literature. Each of these faculties elects a dean, secretary, and four *vocales* who have charge of the courses of study and other matters peculiar to their branch, while the four directories (*juntas directivas*) form a council charged with the sole administration of the professional schools. Forty professors teach one hundred and thirty-three pupils at a cost of $24,903.96 to the nation. The law claims forty-two pupils; medicine, seventy; engineering, eleven; and literature, ten. Special instruction does not stop here, for there are also in the capital seven schools, costing $21,762.24, and teaching two hundred and forty-two

pupils in the following branches:—

Music and Oratory	66	pupils.
Commerce	50	”
Design	62	”
Arts and Occupations	55	”

A school for deaf-mutes has nine pupils. The Polytechnic School is under the direction of the Minister of War, and has eighty pupils. It is interesting to note that the system of marks in use in this institution has recently been adopted in Harvard University.

While I am aware that a mere table of numbers, a census of pupils and teachers, even if illustrated with the courses pursued and the instruments for instruction, cannot convey to my readers a fair understanding of the results accomplished by the system of public education in Guatemala, I may be permitted to say that I have for six years performed with attention my duties on the school-board of one of the largest cities in the North, and my interest in the subject of education led me to examine the schools of this Southern city, with constant comparisons with the type most familiar to me; and the conclusion to which I arrived was that the system in Guatemala was excellently suited to the country and people, that the Government had done better than my own Government in the North, and if the results were not in every case all that could be desired, it was not the fault of schools or teachers. I have examined both public and private schools, containing both ladino and Indian children, and have found many well-instructed boys and girls, but never the execrable system of cramming so much in vogue at the North. I did not see the sallow, pimply,

stooping, weak-eyed boys that form so large a minority of the public-school children at home. I am sure that if fewer “branches” are taught here, less ill-health results; and I am quite ready to honor good health before mere book-learning.

With some hesitation, I add to the means of education the modern newspaper. Before the election of Barrios there were but two official publications of this class,—“La Gaceta” and “La Semana,” both proceeding from one pen, and the journal of the Sociedad Económica. Now there are in the capital four printing establishments, and the list of publications is a very respectable one. The official “El Guatemalteco” presents four times a week all official announcements, including the text of all public grants or contracts,—a plan which must place a check on extravagance or improper favoritism. “La Estrella de Guatemala,” an independent daily; “Diario de Centro-América,” “La Gaceta de los Tribunales,” twice a month; “La Gaceta de los Hospitales,” monthly; “El Horizonte” and “El Ensayo,” weekly, are published in the capital. In Quezaltenango “El Bien Publico” is a well-written twice-a-week publication. In Mazatenango “El Eco de los Altos,” twice a month; in Antigua “El Eco del Valle,” daily; in Chiquimula “El Oriental,” weekly; in Salamà “La Voz del Norte,” in Coban “El Quetzal,” both weekly, have a considerable local circulation; and during the session of the Asamblea full stenographic reports of the proceedings are published in the “Diario de las Sesiones.”

I cannot say much about the Guatemaltecan libraries, although not for the reason that made the chapter “On Serpents” in the History of Norway so famous. The national library is very small, and the

treasures of manuscript which survived the ungentle hands of the early rulers have been so carelessly guarded that the choicest are now in foreign hands (French and German); and the printed volumes relating to the history of Central America, or the publications of the native Press, are difficult to find. There are no important bookstores in Guatemala, and I had the greatest difficulty in obtaining a sight of Fuentes and Juarros, both of which I found only in private libraries. In an old curiosity shop a copy of Villagutierre Soto Mayor's "Historia de la Conquista de la Provincia de el Itza" was held at $50, or twice the price the old folio fetches in London.

With no Coast or Interior Survey (except the temporary work of the Commission on the Northern Boundary), there are few scientific or historical publications issued by the Government.

The debt of Guatemala is reported at a total (1885) of $5,817,947.19, drawing interest at six per cent. It is made up of the following items:—

An English loan for which Guatemala became responsible in the days of the Confederation	$554,268.83
An English loan of 1869 (by President Cerna)	3,599,771.75
Government bonds in circulation (Interior debt)	1,663,906.61
	$5,817,947.19

For the payment of the bonds of the Interior, a sinking-fund is provided, consisting of fifteen per cent of the duties on imports, the sums received for exemption from military service, etc. The average

duties on imports are between fifty-five and sixty per cent *ad valorem*.

The income of the republic during the year 1882 was:

DIRECT TAXES.		
3% on real estate	$103,886.05	
Road tax	34,830.85	
Military tax	13,925.17	
Abated taxes	4,132.56	
		$156,224.63
INDIRECT TAXES.		
Duties on imports	$1,698,469.93	
Duties on exports	66,685.36	
Harbor dues	3,960.22	
Stamped paper and stamps	114,221.57	
Impost on native flour	47,198.19	
Impost on salt	27.454.58	
Impost on legacies	11,514.06	
Beneficio de Reses	99,964.59	
5% on transfers of real estate	53,530.42	
		2,122,998.92

Tax for higher education	$10,127.87	
Tax for municipios	10,678.62	
Tax for police in the capital	113,296.13	
Tax for hospitals	119,507.26	
Telegraphs	55,575.96	
Mails	25,687.95	
Mint	19,518.51	
Fondos judiciales	6,513.19	
		360,905.49
Excise on liquors	$1,266,042.43	
Excise on tobacco	346,263.15	
Excise on gunpowder and saltpetre	23,994.31	
		1,636,299.89
Various income		135,457.44
Contracts, etc. (anticipation of taxes)		2,030,033.01
		$6,441,919.38

Of the expenses of the Government for the same fiscal period, it will be seen from the following abstract that the army expenses form more than a sixth of the entire sum, even in a time of peace.

EXPENSES OF ADMINISTRATION.

Department of the Interior	$167,349.25	
” Treasury	208,872.45	
” War	1,164,521.37	
” Justice	723,746.93	
” Public Instruction	252,891.62	
” Foreign Affairs	80,850.11	
		$2,598,231.73

GENERAL EXPENSES.

Collecting direct taxes	$6,962.01	
” indirect taxes	32,410.52	
Excise on liquors	126,031.04	
” tobacco	96,289.65	
Higher instruction	25,418.55	
Municipios	15,704.77	
Pawnshops and pensions	45,053.54	
Mails	42,725.16	
Telegraphs	101,288.61	
Mint	20,539.59	
Mobiliario	2,986.76	
Hospitals	136,794.20	
Police	148,128.12	
Confiscations	581.52	
Judiciary	6,033.37	
Extraordinary	6,606.92	
Gunpowder and saltpetre	2,960.64	
		816,514.97

Interest	$200,325.81	
Purchase of tobacco	99,342.05	
” gunpowder and saltpetre	5,795.70	
Repayments (*Devolutiones*)	14,373.07	
Public property	6,197.09	
Accounts	2,010.24	
		328,043.96
Funding bonds and obligations		2,554,076.94
Subsidy to street-railroad		833.33
Various payments		205,721.45
		$6,503,422.38

However dry long columns of figures may be, they tell the story in the shortest way, and will give to those interested in the work of a Government some insight into its methods. Like many other Governments, that of Guatemala anticipates taxes, borrows, and issues paper obligations. Its chief income is from the sale of liquor and from import duties. I have in another place described the method of taxing the sale of liquors, and I may say here that the tax seems to be collected with fairness; but the heavy import duties offer a premium on smuggling, and I was told some very ingenious and amusing methods that had been used to evade the customs. If the ports of Guatemala were not just what they are, it would be a very difficult matter to collect the revenue from imports.

The currency of Guatemala is silver, with the exception of about $50,000 of Government paper, and, like the silver currency of the United States, is

worth only about seventy per cent of its face in gold; but, unlike the Northern Republic, Guatemala has not the power to float her debased coin, and the standard is therefore American gold. To meet its needs the Government sometimes mortgages to money-lenders its revenues in part, or even puts a custom-house in pawn; and cases have occurred where its subsidies have been suspended by arbitrary decree for a year, or even longer. Hence the unwillingness to embark in any enterprise that is largely dependent on Government aid. Even the mail-subsidies when paid are paid with orders on the customs. This, together with the very heavy import duties, certainly checks the investment of foreign capital; though to those within the country, and informed as to methods, the duties are much lightened by purchasing Government bonds at fifty per cent and paying them for duties at par. By this and similar practices, which I do not think it best to describe, large mercantile establishments derive great profit at the expense of the revenues.

To meet the needs of commerce there are but three banks; two, “El Banco Internacional” and “El Banco Columbiano,” are in the City of Guatemala, while the third is in Quezaltenango. These have between them a capital of perhaps $5,000,000, and they do the business of banks of circulation, deposit, and exchange. The usual rate on deposits subject to sight drafts is three per cent per annum, and on current accounts and discounts twelve per cent; while they pay their stockholders from twelve per cent to twenty per cent in dividends. The Banco Internacional has called in but seventy per cent of its capital stock. These banks date only from 1875, and their notes are hardly current outside the larger cities. Many of the principal mercantile houses do a

larger banking business, and hold extensive private deposits.

Of large corporations Guatemala has but few. That of the Piers (Compañia de los Muelles de San José y Champerico) has a capital of $250,000; its profits are said to be immense, as it holds the monopoly of all the landing facilities on the Pacific coast. The railroads between Guatemala and San José, and between Champerico and Retalhuleu, are capitalized at about $5,000,000. The proposed railroad from Puerto Barrios (Santo Tomas) to the capital, at present mostly owned by natives, will, it is supposed, cost from twelve to fifteen millions. The street railway in Guatemala has a capital of $200,000.

The Government owns the entire telegraphic system of the republic, and all the towns of any importance are connected by more than three thousand miles of wire, with seventy offices. The expenditures of this bureau seem to be nearly twice the amount of the receipts, and from the nature of the country the cost of maintenance must be very great, owing to the rapid growth of tropical vegetation and the destruction wrought by insects, especially the *comajen*; yet the tariff is reasonable, and one can, while paying for a message, pay also for the answer (*contestacion pagado*). Both the designs on the telegraph blanks and the paper used are much better than the companies in the United States supply to their customers. By cable Guatemala has communication with South America, Mexico, the United States, and Europe.

The mail service is excellent between the principal towns and foreign ports; but owing to the nature of the country the time consumed over the less-frequented roads is very great. As a fair indication of

the development of the country since 1871 under the administration of President Barrios, the great increase in the amount of matter sent through the mails may be cited; for in that year the total number of letters, papers, and circulars did not reach fifty thousand, while in 1884 it exceeded three millions. Guatemala has joined the Postal Union, but demands ten cents per rate on letters leaving her ports. While so many of the great nations put upon their postage-stamps the portraits of their rulers or most distinguished men to be spit upon and defaced, this republic, with better taste, submits only the national bird (quetzal) to this rough treatment.[47]

What a people imports is always a matter of no slight moment in studying their social condition; and on examining the classified list which I have taken from the official publications, one will see several very curious facts. First a large amount of cinnamon is imported, chiefly to flavor chocolate, when it might readily be raised at home,—indicating that the enormous duty of one hundred per cent does not prevent importation or stimulate home production. The same may be predicated of white wax, wheat, and flour, for bees flourish in the uplands, and the wheat is of the best quality; but mills are scarce, and private enterprise is wanting. Few printed books are imported; and as the domestic publications are unimportant, we must infer that the Guatemaltecans are not a reading people. The table also gives an idea of the duties levied, and is worthy of attention. That the reader may see how little the commerce of the United States brings to Guatemala, I have given a table of imports by countries. Nearer than England or France, it is still cheaper to pass her by and go to the distant markets.

CLASSIFICATION OF IMPORTS BY SEA IN 1884.

	Values.	Duties.
Oils (vegetable)	$14,839.45	$14,128.30
Aguardiente	35,124.70	43,694.75
Cotton thread and cloth	1,607,362.34	1,594,756.48
Firearms	1,758.00	2,435.00
Shoes	3,697.42	3,926.28
Cinnamon	20,845.00	20,194.45
Carriages	2,600.00	1,575.00
Barley	4,386.20	438.62
White wax	3,122.50	2,982.20
Beer	29,856.20	30,267.96
Preserves	47,539.87	41,851.68
Glass	10,725.63	8,397.56
Money	82,932.00	free
Sundry articles	11,375.40	11,594.34
Drugs	21,462.94	22,794.77
Stearine, crude, and candles	14,798.15	11,563.22
Matches	7,235.76	7,359.43
Flour	118,490.00	139,082.10
Iron in bars, etc.	85,852.25	99,637.37
Instruments,— agriculture, arts, and sciences	2,728.80	272.88
Wool, thread, and cloth	146,294.34	159,381.69
Printed books	12,627.50	1,252.75

Sweet liquors	5,386.65	5,893.49
Linen cloth	11,743.17	11,236.54
Earthenware	15,490.86	14,129.36
Timber for building	35,594.00	free
Machinery	48,475.70	4,847.57
Medicines	52,952.85	54,326.68
Hardware	23,738.46	21,954.95
Wooden furniture	1,143.50	1,865.46
Articles for institutions of charity or public education	10,837.94	free
Paper	41,694.37	29,358.39
Perfumery	5,873.65	6,034.26
Petroleum and naphtha	14,764.00	8,439.30
Pianos	10,950.00	6,470.00
Tanned leather	56,863.84	31,263.10
Prenderia fina	19,145.00	1,914.50
Utensils of tin, iron, etc.	24,678.26	21,245.84
Clocks	3,956.00	786.55
Empty bags	25,384.83	free
Salt	4,122.30	12,778.56
Silk thread and cloth	102,835.72	116,936.29
Saddles	946.25	1,082.00
Hats of all kinds	23,751.68	24,369.35

Corrugated iron, barbed wire, carts, pumps	18,462.70	1,536.91
Wheat	60,128.51	28,362.68
Railroad supplies	328,426.37	free
Wine	48,697.40	52,165.24
	$3,281,698.46	$2,674,583.85

IMPORTED IN 1884 FROM

England	$1,735,954.87
France	450,365.75
CALIFORNIA	**391,782.50**
Germany	170,824.35
NEW ORLEANS	**103,548.24**
NEW YORK	**98,296.18**
Switzerland	75,173.61
Spain	69,387.49
Italy	51,632.60
China	48,594.32
Belgium	29,781.25
Belize (British Honduras)	28,937.48
Central America	14,569.77
United Slates of Columbia	10,314.05
Chile	2,536.00
	$3,281,698.46

California furnishes most of the flour and wheat, but New Orleans most of the timber for building, while New York contributes printed books, canned goods, clocks, firearms, and patent medicines. From the three ports of the United States which are in

direct steam communication with the ports of Guatemala goods valued at $593,626.92 were imported,—less than came from France and Germany, and not a third part of what England sends. Yankee traders are certainly left entirely behind in Guatemaltecan commerce. Without going deeply into the causes which drive the United States from a natural market, I will state several facts which an intelligent reader may interpret for himself.

The largest mercantile houses in Guatemala are German; Americans of the North are absent. When it was suggested to the agent of one of the largest cotton-mills in New England that the cases in which its cloths were usually packed for market could not be handled in a country provided only with mule transportation, the Yankee agent thought it not worth the trouble to pack in smaller bales, as did the English and French manufacturers. Ready-made clothes are cheaper in France, and shoes in Germany and France. If I want barbed wire for my fences, corrugated iron for my warehouses, or rails for my tramways, my English correspondent can deliver all these to me on my wharf at Livingston much cheaper than I can buy any of these manufactures of iron in protected New York. England, from her experience in her tropical colonies, knows how to prepare merchandise, and what sorts are needed for the trade with tropical America; she buys the crop of mahogany, logwood, and coffee, and saves exchange by selling her own products, and at the same time supports her own vessels in the carrying trade. If it were not for the fresh fruit which the United States needs, there would probably not be a single line of steamers between these countries; for on the Pacific side Guatemala is merely a way-station. Finally, the sarsaparilla goes to England, and is there

manufactured into extract or syrup for the use of the immense establishments of patent medicines in the United States.

Now let us see what Guatemala contributes to the needs of foreign nations; and I give a table of exports for two years, that the changes may be noted. Of the former staples, such as indigo and cochineal, the amount now exported is insignificant; the exportation of coffee fell off, owing to a short crop; sugar was influenced by the low prices ruling in foreign markets.

TABLE OF EXPORTS.

	1883.		
	Cwt.	Price	
Indigo	135.02	$1.25	
Sugar and muscovado	44,927.27	.05	
Bananas (bunches)	29,699.00	.40	
Ores	160.80	.20	
Cacao	97.66	.40	
Coffee	404,069.39	.12	
Cochineal	184.01	.50	
Ox-hides	7,577.41	.20	
Deer-skins	230.83	.40	
White wax	22.34	.50	
India-rubber	3,454.14	.65	
Timber (feet)	253,504.00	.04	
Heifers	230.00	25.00	
Cows	89.00	15.00	
Woollen cloth	211.54	1.50	
Sarsaparilla	332.12	.10	

Suelos	96.06	.40	
Various articles			
Current money			
Totals	744,720.59		$

The business is divided between the three principal ports in the following proportion:—

	San José.	Champerico.	Livingston.
	cwt.	cwt.	cwt.
Imports	308,596.27	62,789.62	51,698.
Exports	170,615.90	224,739.49	31,134.

I have elsewhere written of the products that Guatemala might export, and I willingly turn from the commercial features of the country to those that affect the comfort and happiness of the inhabitants. A sufficient government is the first necessity. To sustain this the people must be educated; and to develop it the country must possess natural riches and the opportunity of marketing them. But all these elements work, not in a line, but in a circle, as it were. Without revenue, government cannot provide for free education; without education, a people will not establish a wise form of government; without a wise government, the resources of the country cannot be developed to yield a proper income. All these things are interdependent. The government must foster education and protect property; it must encourage those occupations which increase the material wealth of the people. Increased wealth means larger revenue, and permits greater expenditures for public works; so government and people grow together.

Possessed of a remarkably fine climate, a favorable

geographical situation, and great variety in its fertile soil, Guatemala has a population poor and unable to undertake important works which require capital. Money must therefore be sought abroad to develop the riches of the land, which are in agricultural products rather than in mines; and the Government offers to any industrious, respectable colonists suitable tracts of public land (*terrenos baldíos*), together with exemption from duties and taxes for ten years. That this offer may not seem too attractive, it must be added that the best public lands remaining undisposed of are remote from ports, with no adequate means of communication. They are also covered for the most part with dense forests, to be cleared away only at great expense. Besides, it is well known that whenever virgin soil is broken up, mysterious fevers and malarial emanations are liberated from the soil; and although these are not dangerous to men of good constitution, they certainly are not pleasant. Not only enterprise and perseverance are needful for the planter, but a respectable capital as well; for the colonist has to build his own houses, wharves, and bridges, make his own roads, and own his tools, animals, boats, and carts.

Labor is both by the day and by the task, and wages are very low. A day's labor—from six o'clock in the morning to six at night, with an hour from ten o'clock to eleven for breakfast (almuerzo), and another from one o'clock to two for rest—is paid from twenty-five to fifty cents. Laborers are also hired by the month, with allowance for rations. On the Atlantic coast the Carib is a good, strong workman when properly managed, while in the interior the Indios and ladinos supply fully the present demand.

Articles of food are cheap, and some of the prices, as given by the Minister of the Interior, are as follows: beef, pork, and mutton, eight cents per pound; fowls of good size, thirty-seven and a half to sixty-two cents; rice, a dollar and a half to two dollars per arroba (twenty-five pounds); flour, eight to nine dollars per quintal (one hundred pounds); maiz, a dollar and a half to three dollars a fanega (four hundred ears); beans, white, black, or red, four to six dollars a quintal; eggs, a dollar and a half a hundred; milk, six cents a bottle; cheese, twelve to twenty-five cents a pound; butter, sixty-two cents per pound. Guatemaltecan cookery, although simplicity itself in its instalment, is excellent and wholesome,—none of the vile saleratus-bread, tough doughnuts, and clammy pies (I have great respect for a good tart) which are the curse of the country cooking of New England. But let the comida consist of only tortillas, frijoles, and huevos; these staples are always well cooked.

Of the industrial and mechanical arts Guatemala has very little to show, apart from the woven fabrics and pottery already alluded to. Tailors and shoemakers abound,—and this in a climate where the former might almost be dispensed with, and where the latter work for not a moiety of the population. On the other hand, there are few cabinet-makers, although the native woods offer the choicest material for the skilled workman. There are no foundries or forges worthy the name, and all machinery is imported, and repairs must be made in San Francisco or New Orleans. Glass, porcelain, and stoneware is all imported, although the materials, of the best quality, are found here in abundance. Fibre-plants and rags are plentiful, and the consumption of paper is large; but every sheet is imported,—that

used for stamps being made in France. While coconuts, sesame, cohune, castor-bean, and croton grow abundantly, there is no commercial manufacture of the vegetable oils; and we have seen that more than fourteen thousand dollars' worth were imported in 1884.

While the general climate of Guatemala is remarkably healthy, the people are exceedingly careless of all sanitary precautions, especially in the matter of drainage and the waste products of the human body, trusting to the intervention of vultures and dogs to remove health-endangering filth. Yellow fever was common through the hot lowlands of the Pacific coast in 1883, and whooping-cough, measles, and small-pox prevailed in many parts of the country. The consumption of patent medicines and empirical preparations, obtained from the apothecary rather than the physician, is enormous in proportion to the population. Vital statistics are not obtained with the greatest accuracy, and only the constant care of the superior officer enables any result worthy of attention to be obtained. The following table is tolerably accurate. The population is, as estimated on December 31:—

Year.	Population.	Births.		
		Males.	Females.	Tota
1881	1,252,497	28,146	25,708	53
1882	1,276,961	29,362	26,697	56
1883	1,278,311	28,488	25,934	54
1884				
1885				

Of the children born in 1883, 41,260 were

legitimate, and 13,162 natural; 16,991 were ladinos, and 37,431 Indios. The legitimate children were in the proportion of one to every one hundred and twenty-eight of the ladino population, and one to every forty-one of the Indios. The natural births stand one to each one hundred and eighty-three ladinos, and one to each two hundred and seven Indios,—proportions which speak volumes for the superior morality of the indigenous population.

No less than nine hospitals were supported by the Government in 1883,—one each in Antigua, Amatitlan, Escuintla, Quezaltenango, Retalhuleu, and Chiquimula, and three in Guatemala City. In these 11,998 patients were treated during the year, with the result of one death to every thirteen treated. Of the diseases from which patients died, the following is a list of all numbering over ten victims:—

Consumption	75
Fever (perniciosa)	74
Dysentery	68
Entero-colitis	63
Yellow fever	52
Enteritis	42
Pneumonia	33
Alcoholism	24
Small-pox	18
Cachexia paludica	18
Typhoid fever	11

Of the consumptive patients, probably the majority were foreigners seeking safety in the mild climate of Guatemala; and in the others the disease was not of throat origin, but sprang from that unclean state that

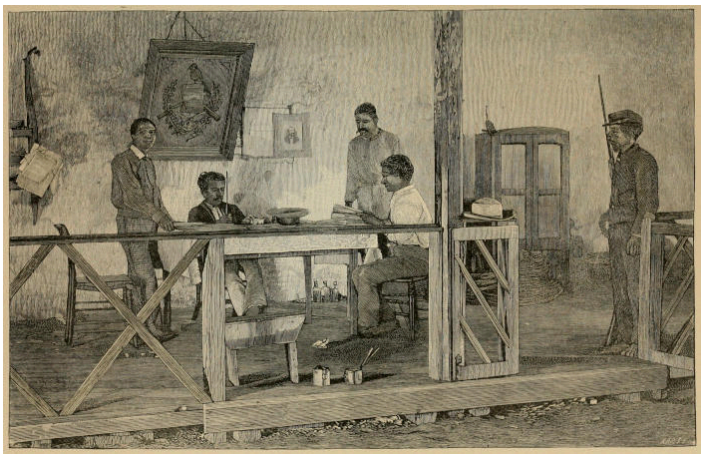
wise physicians are beginning to recognize as phthisical in its tendency.

I wish I could say more of the remedies of the Indios. In a land abounding in healing plants, it would be supposed that the inhabitants would be expert in their qualities; and so the Indios are, if report may be trusted (they are said to cure even hernia, by applying astringent herbs to the tumor). But they are shy, and unwilling to display their knowledge before strangers; and my stay among them was too short to invite their confidence. The Caribs do not seem to possess much knowledge of the healing art.

From the bodily ills of a people one turns naturally to the moral diseases; and it is interesting to note what are the crimes and misdemeanors to which punishments are most frequently allotted. Of 9,303 persons tried during the course of 1883, 6,125 were accused of misdemeanors (*faltas*), and 3,178 of crimes (*delitos*). Of the former class 764 were acquitted, while of those tried for crimes 1,515 were judged not guilty,—leaving only 1,663 criminals out of a population of a million and a quarter. The carefully prepared tables published each year by the Government show that there is hardly one delinquent for each thousand inhabitants; that notwithstanding the greatly inferior numbers of the ladinos, this class claims many more convicts; and that eighty per cent of the criminals have no education.

Crimes or Delitos.	Males.	Females.	Ladinos.	Ind
Against authority	133	6	111	
Assaults	56	5	51	
Wounding	396	21	298	

Homicide	188	15	117	
Bodily injuries	312	35	202	
Adultery	55	55	69	
Seduction	38		24	
Rape	42		41	
Lewdness	68		50	
Injurias	80	50	106	
Cattle-stealing	74		40	
Tricks	39	10	44	
Robbery	32	5	33	
Larceny	303	49	264	
Against liquor laws	276	316	313	
Smuggling tobacco	25	12	25	
Defrauding	95	75	71	
Desertion	49		48	
All other delitos	227	36	188	
Totals	2488	690	2095	



A COURT SCENE AT LIVINGSTON.

Included in the “other *delitos*” are several crimes

much more common in New England and elsewhere, —perjury, nine; libel, fifteen; arson, thirteen; poisoning, three; infanticide, four; bribery, two; abandonment of infants, four. In Livingston the "Court" kindly consented to sit for its portrait; and although this abode of the blind goddess was very dark, I got a satisfactory picture. I also photographed a man sitting in the stocks and undergoing a whipping; but this the principal citizens prayed me to suppress.

Misdemeanors or faltas.	Males.	Females.	Ladinos.	Inc
Against public order	3,680	740	1,679	
" municipal law	146	13	111	
" persons	933	393	832	
" property	152	31	141	
" military discipline	37		21	
	4,948	1,177	2,784	

A notable fact in regard to punishments in Guatemala is their publicity. In New England every effort is made to conceal criminals from public gaze; the punishment which is intended to deter others from a similar act is, foolishly enough, merely a matter of hearsay to the bulk of the population. A silly sentimentality hides the convicts in prisons better and more commodious than the homes of a majority of the people, feeds them with sufficient and wholesome food, and in general wastes more pity on them than it vouchsafes to the honest poor,— and all this at the expense of innocent citizens! In Guatemala I examined many prisons, finding them

all open to inspection. The passer-by can see through the grated door of the *carcél* all the prisoners within. When finally sentenced, the criminals are put upon the public roads and set to work under guard and chained, so that every one may be reminded that the "way of transgressors is hard." In the prisons they sleep on mats, and receive from the Government a real (twelve and a half cents) a day, with which to buy food. In the new prisons all the modern improvements are introduced, and hard labor is provided in great variety. I believe also that as large a proportion of crimes is detected and punished as in any other country. I have been enabled to follow several cases through the courts, and found the decisions in strict accordance with the law, both in criminal and civil actions.

It would be unfair to pass in complete silence the darker scenes in the life of the Guatemaltecan republic; but I confess to an ignorance as to the exact truth of the stories that have been whispered about, —whispers indeed that I heard myself while in the City of Guatemala. Distinguished members of the old conservative party assured me that they lived in daily dread of the Government. Spies and informers were ready at all times to entrap them if in an unguarded moment they should utter their opinion of the political situation, or condemn official corruption. Trial by court-martial—that most odious form of injustice—might result in their banishment or death; and I was told that the laws, however generally wise, really depended on the caprice of the President, who could suspend or annul them whenever he saw occasion. I am sure that these persons believed what they told me with bated breath; but I also know to what extreme opinions political dislikes will lead in these Southern

republics. On the death of Barrios and the accession of Barillas, it is said that eight hundred political prisoners were released from the prisons where they had been immured by the late President, often without even the form of a trial. The universal rule of favoritism is too evident to be concealed, and the *amigo del Presidente* has certainly undue power. To our Northern haste the tedious delay of all official work is a marked contrast, for the officials have not the skill, wisdom, or cunning of the members of our Northern legislatures, who remain in session an unconscionable time, apparently overwhelmed with work, although when they at last adjourn, the records show scant results. The Government of Guatemala is republican in name only, the President having actually as much irresponsible power as the Czar; but so far as actually proved, this power is used with moderation, and is perhaps a political necessity of the country and race, however repugnant to Anglo-Saxon ideas. As in all small governments, there is much form and red-tape, and the individual or company who has business with the authorities must have an accredited agent at the seat of Government to present petitions, press suit, or patiently await the result; no person at a distance has any prospect of prompt attention. With the exception of some of the higher officials, there are but few Guatemaltecans who really welcome foreigners, and among the Indios there is little attempt to conceal the feelings of jealousy or distrust with which outsiders are regarded. While the future growth of the country depends on the introduction of foreign capital, there are not many, now that Barrios is no more, who will dare to offend popular prejudices by openly taking the part of foreigners who either have invested capital here, or intend to do so. The popular

idea of the day is a renewed confederation of the five republics, with Guatemala at the head; this means no extension of foreign relations, but the impotent self-sufficiency that has always distinguished Central America and retarded her advance.

Many indications point to an attempt in the near future to renew the confederation of the five republics, and it is not improbable that Mexico may be included in the Central American Estados Unidos. It was the ambition of General Barrios to become emperor or president (the name matters little) of all Central America; and he lost his life in the attempt. His death will not deter the politicians of the several States from attempting a revolution which may aggrandize their private fortunes in the general disturbance. If Mexico—a very inferior nation both in the character of her population and in natural resources—could be left out, it would seem very possible to unite again the fortunes of Guatemala, Honduras, San Salvador, Nicaragua, and Costa Rica; but such a confederacy would not attract foreign capital as readily as a treaty alliance between quite independent republics, owing to a widespread distrust of the permanency of any confederacy. If the laws of the United States stretched to the Isthmus of Darien, doubtless capital would eagerly enter this rich field; but at present it is as safe under the laws of Guatemala as under those of any Central American country.

As England and Germany always protect the interests of their subjects wherever invested, and as the United States Government has neither the will nor the power to guard the interests of her people in foreign lands, it is not strange that Englishmen and Germans embark in profitable enterprises in the

Central-American Republics while Americans hesitate. At present we have to trust for our commercial rights to the general laws of nations and the favorable inclinations of the existing Government.

CHAPTER XI.
VEGETABLE AND ANIMAL PRODUCTIONS.

Tropical vegetation cannot well be described; but the fact that even when seen it is hard to understand, need not prevent an attempt to sketch the general features. The real trouble that meets the novice on the threshold of the tropics is the utter inadequacy of the English language to express the variety and luxuriance he sees in the vegetable world. Even in color his vocabulary fails him, and he must include in the name “green” so many distinct tints that at last he relinquishes the difficult task and falls back upon the commonplace epithets, or leaves his tale untold. In the abundance, in the confusion, of plant-life the observer sees that as he goes from shore to mountain the trees and plants are not the same, and he will readily divide the vegetation into four tolerably distinct regions; these are the Shore, the River-bottoms, the Upland, and the Arid plain.

On all the low Cayos that are almost awash with every wave, and on the low margin of the mainland, extending up the wide rivers for miles, are the mangroves (*Rhizophora mangle*), giving the landscape a dull look not at all attractive. They make indeed a hedge of interlaced branches and tangled roots inhospitably forbidding landing on the shores. In their branches are orchids, bromeliads, and other showy plants, while above all this comparatively low bush rises the graceful coco or the confra (*Manicaria*

Plukenetii). The presence of mangroves is usually considered an indication of the haunt of malaria, but on insufficient grounds; for when these trees are cleared away, the shore is admirably suited for coconuts, which with equal unreason are popularly regarded as token of a salubrious climate.

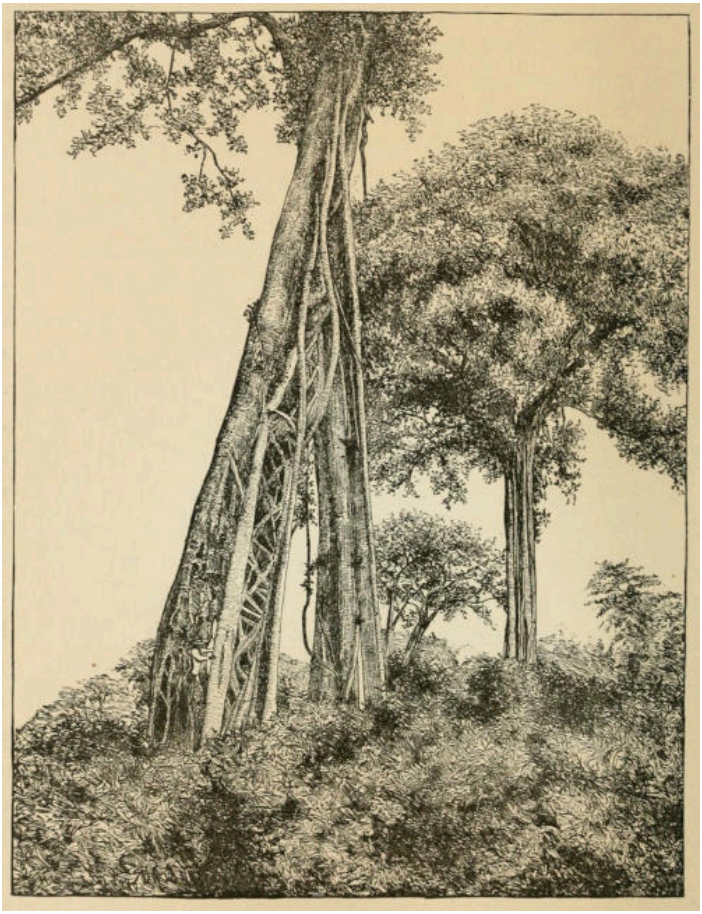


IN THE CHOCON FOREST.

As we follow up the rivers from the shore, we see the mangroves breaking their dense wall, while reeds and bambus fill the gaps; until at last mangroves have disappeared, as the rich valleys are reached. And now no one, or two, or six species can claim supremacy. Two trees are, however, prominent, where man has not interfered,—the cohune and the mahogany; both trees of attractive form and size, and both by their presence indicating the richest soil. The unspoiled forest of the river region presents a wonderful variety above the ground; but among its roots the exceptionally rich soil is almost bare, dwarf palms, wild bananas, gingers, and ferns scantily covering its surface. From the trees hang long vines (*vejucos*), some of them of value for cordage, others,

as the paullinia (*P. sorbilis*) and zarza (*Smilax sp.*), possessed of medicinal properties, while others are full of grateful sap. Endless variety reigns, and on every side the puzzled observer sees different trees. Often the stems are so covered with orchids, aroids, and other parasitic and climbing plants that they can hardly be recognized, and their leaves and flowers are but a part of the fresh canopy some sixty feet or more above the ground. From a mountain ridge this forest looks like a level plain, even as the top of a well-trimmed hedge; its surface is here and there broken by the giant mahogany, or seamed by the river and its affluents. Rosewood, cedar, palo de mulatto, cacao, figs,[48] are all here, and the palms, from the noble cohune to the insignificant chamaedoras, are plentifully scattered among the other trees. During the season of flowers the brilliant yellow of the wild tamarind (*Schizolobium*), the equally bright magenta of the Palo de Cortez, and the white of the plumosa, appear to the observer from above like a rich mosaic, while all this color is invisible to one who is beneath these trees. All vegetation here is not merely luxuriant, it is composite. There are no solitary trees, no hermits, in the vegetable world. Every trunk is but a trellis for vines, some of them, like the matapalo, strangling the fostering tree, or a nest for plants that do not seem able to get up in the forest on their own stems. If I find a branch in blossom, I must make sure that it is of the tree itself, and not part of some mistletoe-like hanger-on. I have seen single trees bearing on their trunk and branches enough orchids and other choice plants to stock a hothouse. The matapalo deserves more than a passing word, for it is the type of a numerous group of plants in the tropics. This vine may start from the ground, but quite as often it

germinates in the hollow of a branch, or among the other parasites of the higher branches; in either case it is at first a slender, innocent-looking vine, clinging timidly to the tree for support and protection. Soon the vine grows until its proportions resemble those of a huge serpent, and it has reached the topmost branches and mingled its own foliage and flowers with those of its trellis. The standard tree is from that moment doomed, and wastes away in the murderous grasp of the vegetable anaconda. The matapalo may fall in the ruin of its decaying foster-parent, but not infrequently it has prepared for the emergency by sending out many a guy and splitting the main stem into numerous buttresses, so that it can stand alone —a very remarkable tree, and one often used as a boundary-mark.



Matapalo Tree.

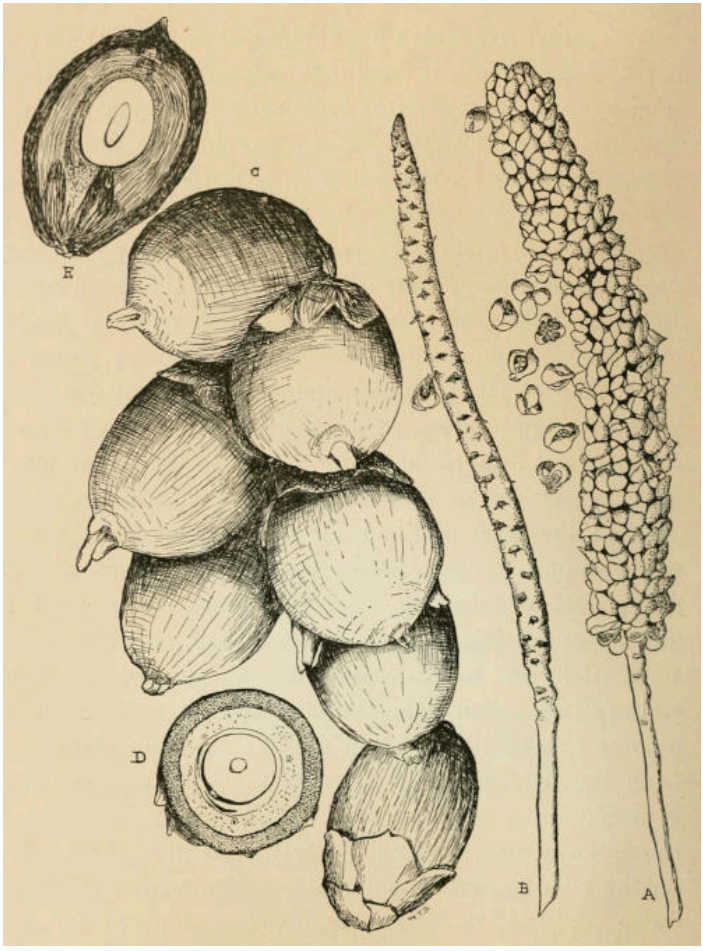
In this region of the river-bottoms we could linger long; but it must be left, for a scientific description of its treasures would fill many volumes of the size of this, and the explorer has not yet collected[49] the material needed. Any botanist who would devote three months to the thorough exploration of the valley forests of Guatemala ought to add not less than a hundred new species to the flora of the

region, and also determine the species of most of the beautiful cabinet woods now known only by their native names.[50]

Climbing the hills brings one to a very distinct vegetation, and here in the uplands are trees in masses; that is, there are whole forests of one or two species, and the representatives of the kinds most common in the cooler regions are found here. There are pine-trees as much as eight feet in diameter, and spruces of little less size. Oaks also of several species are abundant; but the palm family almost disappears in the dryer soil, only the cabbage-palm climbing out of the rich lowlands,—and that is not abundant enough to give character to the vegetation. While in the lowlands the ground is devoid of sod, here the grass carpets the soil, extending to the very tree-trunks, and is kept in fine order by the numerous sheep. Agaves are found on the hillsides, creepers like the clematis take the place of the vejucos, and stevias, bouvardias, and dahlias that of gingers and marantas.

The fourth region is quite as distinct as either of the others. It comprises the dry lava plains where the changes of diurnal temperature are considerable, and where the soil, though rich, is scant and insufficiently watered. Here are found the calabash-tree (*Crescentia cujete*), espina blanca, or gum arabic, and the cockspur (*Acacia spadicifera*); while a coarse grass covers the ground between the lava blocks.

In Guatemala there are two families of plants,—Palm and Orchid,—presenting numerous species and of attractive and beautiful appearance, at the same time by no means devoid of commercial importance.



Attalea Cohune.

A *Staminate blossoms.*

B *Stem of same.*

C *Cluster of unripe nuts.*

D *Transverse section of nut.*

E *Longitudinal section of nut.*

Chief among palms stands the cohune (*Attalea*

cohune), known also as manàca and corozo. When young, the palm has no stem, its enormous leaves rising from the ground more than thirty feet. The rhachis, or midrib, of the pinnate fronds is of a rich red color, and larger round than a man's wrist, the distinct, conduplicate divisions being long and broad. Mr. Morris estimates a leaf he saw in British Honduras at sixty feet in length and eight feet in breadth. I have never seen one more than forty feet long and five wide; but this is not an uncommon size of the manàca as it is cut for thatching, one leaf extending across the roof. After remaining some years in the manàca state, the stem begins to elongate, and as it rises, the leaves become smaller, as is the case with the coconut and other palms so far as known. The leaf-stems are persistent, giving the tree a rough, untidy look, but doubtless having a purpose to fulfil in the economy of Nature. This palm is now known as corozo, and begins to fruit. The male inflorescence is an immense mass of more than thirty thousand staminate flowers in a compound raceme between four and five feet long; these have a heavy, not disagreeable odor, and attract a great many bees and wasps, so that on one occasion the mozo who climbed the stem and cut for me a fine specimen was badly stung. These insects were so persistent after a great deal of shaking that the camera was used as quickly as possible, specimens were saved, and the spadix was, with the too-attractive flowers, thrown into the river. The pollen, which under the microscope shows a form exactly like a baker's roll, is in such abundance from the four hundred and fifty thousand stamens that it would fill a pint measure. The spathe, or cover of the inflorescence, looks like leather, is deeply furrowed on the outside, and would make a commodious bath-

tub for a child. The fertile spadix has shorter branches, with the rather large flowers succeeded by from five to ten nuts, the whole bunch, which is about five feet long and weighs more than a hundred pounds, bearing from eight hundred to a thousand nuts. These nuts are two and a half inches long, and covered with a fibrous husk and so thick a shell that the valuable kernel cannot be extracted in quantity without powerful and expensive machinery. Like the coconut, the fruit is normally three-celled. But as in that palm two of the cells give up the struggle for existence in early life, so in the cohune; and I have never, in the scores of nuts opened, found more than one cell. Professor Watson has noticed two cells in several specimens, but never three. In the illustration of this palm the bunch of nearly ripe nuts is clearly shown, and in the diagram of flowers and fruit the fibrous husks and the abortive cells may be seen. The natives crush the ripe nuts between stones, and after pounding the rather small kernel in a mahogany mortar, boil the resulting cake until the oil floats; this is skimmed off and boiled again, to drive out the water. The average yield is a quart of oil from a hundred nuts. The oil is said to be superior to coconut-oil, a pint of it giving as much light, or rather burning as long, as a quart of the latter.[51] It is not probable that the manufacture will pay in the presence of the more tractable coconut. As the cohune grows older, the hitherto persistent leaf-stems drop, the scars disappear, and the smooth stem rises thirty to fifty feet clear to the crown of leaves at the summit.

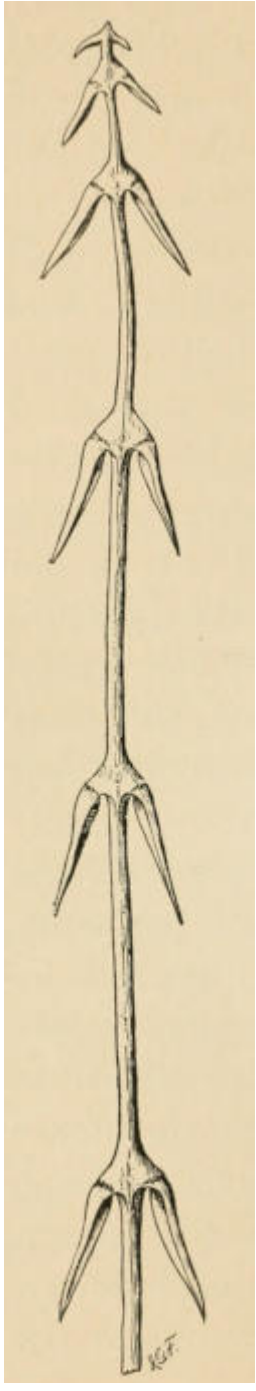


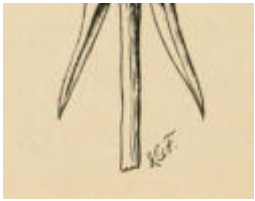
CHOCUN PALMS.

The pimento-palm has a small cinnamon-colored stem much used for house building, as is also the poknoboy (*Bactris balanoidea*). The warree cohune (*Bactris cohune*), armed with spines, bears an edible nut much easier to crack than the larger fruit of the attalea. The cabbage-palm (*Oreodoxa oleracea*) is common in the upper valleys, and the base of the leaf is a very poor cabbage, nor is it eaten to any extent. In the forests the pacaya (*Euterpe edulis*) is a

slender tree, the unexpanded flower-buds being the edible part; and these are on sale in the market-places tied in neat and attractive bundles. In taste it is rather insipid. On the ridges the *Acrocomia sclerocarpa* flourishes; its stem is, like the warree cohune, armed with formidable spines, which serve as pins, needles, and awls. The *Acrocomia vinifera* also is common in the valley of the Motagua. Along the river-banks the *Desmoncus*, a climbing palm, is very common and very troublesome to the explorer; but it shows such a curious adaptation of parts to special ends that its bad qualities may be overlooked by the naturalist. It is generally understood that in the foliage of palms the palmate form is the earlier, and that the growth or development of the midrib results in a pinnate or feather form. This is seen to be the case in the coco-palm, where the first leaves are palmate or fan-shaped; but when the palm is a few months old it puts off these childish garments and dons the toga virilis in the pinnate form. In the desmoncus the development does not stop with the mere lengthening of the midrib, but transforms the leaflets at the end into claws to aid the limp stem to climb into sunlight. Here is a leaf-tip to show how this is done; the ribs of the leaflets, instead of expanding into thin blades, have thickened and bent backward to serve as the barbs of an arrow and allow motion in one direction only. The leaf can push the stiffly bent fingers through the thick foliage, where they stick fast and hold up the stem. The rattan-palm (*Calamus rotang*) of the East Indies climbs over the trees in a similar way. The Guatemalan climber bears a small cluster of spiny but edible nuts. The graceful little Chamaedoreas may be found in flower or fruit at almost any season of the year, and their slender stems make good walking-sticks. The confra

(*Manicaria Plukenetii*), so useful for thatching, grows only near the sea, usually in clumps of five or more. The nut is globular when one-celled, and about two inches in diameter. The coco (*Cocos nucifera*) is too well known to need description, though we shall consider the commercial importance of the nuts presently. Of the other fifty or more species of palms few have been identified, and their local names have no meaning for us.





Leaf-tip of Climbing Palm.

To the family of orchids the collector is sure to turn with eagerness; but I must confess that the brilliant colors and bizarre forms of these flowers are not attractive to me. They are parasites; and although possessing a commercial value far above many more beautiful and honest flowers, only the vanilla has any useful qualities, so far as known. The vanilla moreover is an article of luxury, not necessity; for doubtless the chemist will discover, if he has not already done so, a substitute in some of the thousand and one products of the decomposition of coal-tar.

All along the coast the *Epidendrum bicornutum* and the *Schomburgkia tibicina* are very common, affecting mangroves especially. On orange-trees in the Motagua valley grows a bright little yellow *Oncidium*, the flower being the largest part of the plant. In the mountains is an orchid which bears several long spikes of rich purple flowers, which with the pure white clusters of a ground orchid care much used in church decoration. So little is popularly known of the vanilla (*V. planifolia*) that I may be pardoned for quoting from Mr. Morris the directions lately issued from his Botanical Department of Jamaica, which are entirely applicable to the plant in Guatemala. In the Chocon forests it grows abundantly and fruits naturally, the insect needed to fertilize the flowers being present; and the pods are of excellent quality.

Vanilla.—"This is a vigorous, soft-stemmed vine, the cured fruits of which are the valuable vanilla-

beans of commerce. If cuttings are taken, their upper ends, or portion to appear above ground, may readily be determined by examination of the base of the attached leaf, in the axil or upper face of which is a small growth-bud. Cut the stem with say three or four joints at one fourth of an inch below the basal node or joint, then place the base of each cutting shallowly in prepared soil against the bole or trunk of a rough-barked, low-branching tree, as, for instance, calabash, or on a low-trellised frame three or four feet high, the supports of which should be unbarked logwood, yoke, or calabash.

"If the insect which fertilizes the flowers of this orchid in its natural habitat is not present, in order to secure a crop of fruit it is necessary that the flowers should be artificially fertilized. This may be easily accomplished as follows. In the flower is a central white column, at the summit of which is a detachable cap or anther, which if touched on the lower front edge with a sharpened pencil or knife-blade will adhere to the implement. The pollen masses contained in the anther must then be made lightly to touch the sticky disk situated on the front of the column. Each flower must be so treated at or about noon of the day on which it opens.

"To cure vanilla-beans, gather when full, steep for about two minutes in boiling water, and place in flannel to dry in the sun. When perfectly dry, place them the next day on plates of iron or tin, anointing once or twice with sweet oil, to keep them soft and plump. Complete the curing process by exposing them carefully in the sun for several days [weeks]. When quite cured they should have a uniformly rich brown color, and the full fragrance of this valuable product."

In my own experience I have found it very difficult properly to dry the pods in the damp atmosphere of the rainy season on the coast, and prefer to use the hot-air dryers now generally used for tea, coffee, cacao, etc.

Of the family of ferns little need be said. The gold-fern (*Gymnogramma aurea*) is a common weed at Livingston, and adiantums, lygodiums, and selaginellas are found everywhere in the forests. While the small ferns are abundant, tree-ferns are very scarce, only one specimen being seen (in the forests of El Mico), and that not a fine one.

Mahogany.—From the small extent of coast-line possessed by Guatemala, her mahogany exports are perhaps not so extensive as those of the two Hondurases on either side of her. In 1884 there was exported of all woods (mahogany being the chief) from the port of Izabal (Livingston) a measurement of 352,066 feet, valued at four cents a foot, or $14,082.64; while the shipments from Belize for the same time were about 3,000,000 feet, worth $150,000. This is not because the Guatemalan forests yield less of this valuable wood; on the contrary, mahogany-trees are very abundant in the Chocon forests, on the smaller tributaries of the Polochic, and in the Motagua valley. I have myself seen hundreds of immense trees deep in the forests, while along the larger watercourses the trees have generally been cut. In British Honduras the origin and existence of the colony is due to mahogany-cutting. The mahogany-lands are in the hands of a few proprietors who will not sell nor allow settlers, since the young trees grow rapidly; and it is said that in thirty years from a clearing, logs of large size may be cut from the shoots which spring from the stumps.

The business of mahogany-cutting is thoroughly organized and made the most of. In the neighboring republic, much of the mahogany-land belongs to the Government, which allows any one to cut the timber on pretended payment of five dollars stumpage. A few private individuals cut here and there and in a desultory way. The work at a mahogany bank is generally done by Caribs, who are skilful woodmen. The hunter or *montero* strikes alone into the forest and searches for trees. If he finds enough of a suitable size (squaring not less than eighteen inches) within reasonable distance from the "bank," a road is opened from the tree to the river. Often the buttresses are immense, and the platform, or "barbecue," is raised a dozen feet from the ground. The log is roughly squared, hauled to the river, usually by night, by the light of pine-torches, and only when floated to port is it trimmed into its final shape for the market. The best mahogany comes from limestone regions.

With the mahogany is usually found the cedar (*Cedrela odorata*), from which cigar-boxes are made, and which is also used (as is mahogany) for single-log canoas, dories, and cayucos.

As an article of export, logwood ranks next to mahogany, of which the best is found in the region of the Usumacinta. It is not a large tree, fifteen to twenty feet high, and much easier to handle than the mahogany. The dark heartwood alone is used.

The Santa Maria (*Calophyllum calaba*) is much used in house-building. Rosewood (*Dalbergia*) grows to a large size and is most beautifully veined, as is also the exquisite Palo de mulatto (*Spondias lutea*); but both sink in water, and are difficult to transport. I have used rosewood logs twenty inches thick to

support a cistern, as they are almost imperishable, and not attacked by insects. Sapodilla (*Achras sapota*) is nearly as heavy. When freshly hewn, its color is curiously red, beefy in tone; but it soon loses this on exposure, and shrinks considerably. It splits easily, but is so tough that splinters are used as nails in soft woods. Salmwood (*Jacaranda, sp.*) is light colored, and much used for door and window frames. Ziricote is beautifully veined.

Two species of pine are common, the *Pinus cubensis*, or *ocote*, whence is obtained the fat-pine which serves as candle for a great majority of the people of Central America, and the long-leaved pine (*P. macrophylla*) of the mountains. I have placed in the Appendix a list of other woods valuable in many ways, but never exported, and known only by their local names.

The two products that in former years ranked high among the Guatemalan exports, indigo and cochineal, have now been so completely superseded by other dyes, the product of the laboratory, that they no longer need be considered of importance, although enough indigo is still made to supply native dyers, the Indios especially prizing the true indigo blue. Both dye-stuffs were chiefly cultivated on the Pacific slopes, and I have seen half-neglected *nopaleras* in the vicinity of Antigua and Amatitlan, the nopal or opuntia generally yielding place to sugar-cane and retiring to the roadside and neglected corners, while the cochineal insect, unfed and uncared-for, is gradually disappearing. In 1883 there were exported 135.02 cwt. of indigo, valued at $16,881.25; while in 1884 only 62.67 cwt., of a value of $7,833.75. A more decided decrease is seen in the exportation of cochineal in those years, the

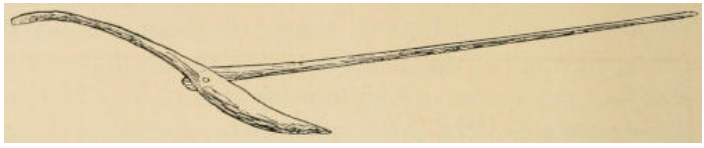
amounts being 184.01 cwt., of a value of $9,200.50, in 1883, against 8.12 cwt., valued at $406, in 1884.

It has been my fortune to visit many of the tropical regions of the world, and I have visited them not from idle curiosity, but with a genuine interest in their inhabitants and productions. I have looked upon the human, animal, and vegetable population of these places as closely as my limited knowledge and the time allowed me would permit. It is an agreeable study to place the physical capabilities of a region, the richness of the soil, the climatic influences, the geographical and commercial situation, side by side with the people, their industry, strength, and intelligence, and from these premises draw the conclusion of the might-be.

Once in travelling alone on horseback over the desert lands which lie between the mountains of the Island of Maui, of the Hawaiian group, I was impressed with the desolate, arid land of that great plain. Stunted indigo, verbena, and malvaceous weeds thinly covered the parched soil, which was cracked in every direction. Ten thousand feet above me rose the vast dome of Haleakala, bare on this landward side, but which had sent down for centuries volcanic ash to make this plain, and which now was covering these earlier deposits with the decomposition of its rich lavas. I examined this soil and found it full of the elements best suited for the growth of cane. As is the case with many of our own Western plains comprised in what was known as the Great American Desert, which have often impressed me as the most inhospitable land, not even excepting the Sahara, I have ever seen, this Hawaiian plain needed only water to turn the desert into a fertile field. I laid before the then Government of Hawaii

my plan for reclaiming this land, which in great part belonged to the School Fund. The Minister of Foreign Relations, the Hon. Robert C. Wyllie, a most remarkable man, saw the physical possibilities, but also the financial impossibilities, so far as the Government was concerned. Years went by, when on a second visit to Maui I had the pleasure of seeing that my plan had in part been carried out by private parties, and prospering sugar plantations, valued at many millions, occupied the once waste land.

In travelling through Guatemala I was convinced of the physical advantages the country possessed, though I was not blind to the indisputable fact that of all countries I have seen, Guatemala, in common with the other States of Central America, makes least use of her natural advantages, and does least to overcome those obstacles Nature has thrown in her way. My readers will pardon me, I trust, if, in briefly discussing the present outcome of the soil, I let my imagination, trained and curbed by an extended experience, suggest at the same time what the wonderfully fertile lands of Guatemala might yield, properly cultivated. While I will endeavor to guard myself from all exaggeration, I cannot conceal from myself the fact that those not familiar with tropical luxuriance of growth and fruitfulness will not fully acquit me of this fault so generally charged to travellers.



Indian Plough; a Type of Guatemaltecan Agriculture.

Sugar-cane.—Arranging the products to be

described, not in a scientific order, but in that sequence which their commercial importance seems to suit, sugar-cane easily leads; and this in spite of the difficulties of the labor supply, which I deem of more importance than the artificial competition of the very inferior sugar-beet. It is a bold assertion that no country or climate is better suited to the culture of sugar-cane. I have watched the growth of four of the choicest varieties[52] of cane side by side with that usually cultivated on the Atlantic coast (Bourbon), compared this with the growth of cane in Louisiana, the West Indies, Guiana, the Hawaiian Islands, India, the East Indies, Egypt, and the Mauritius, and I have ascertained the cost of cultivation, expense of living, yield and freight of product to market, in all these various centres of sugar-production, in a much more elaborate way than would be in place to record in this book.



A Primitive Sugar-mill.

At present the sugar-plantations of any importance are on the Pacific side of Guatemala, although some,

as that of San Geronimo, near Salamà, are in the high interior. The valley of the Michatoya is full of small plantations, or *ingenios*. From the Pacific ports was exported in 1883, 44,927.27 cwt. of sugar, valued at $223,136.35; in 1884. about 7,000 cwt. less. The home consumption of sugar is very great, and most of that raised in the Department of Chiquimula is not exported. Much of the manufacture is by the rudest wooden mills, and the sugar resembles the poorest quality of maple-sugar; it is cooled in wooden blocks in hemispherical form, and comes to market wrapped in corn husks, when it is called *panela*.

That the sugar production may be better understood, I give the statistics for 1883, as published by the Government. A *finca* is a plantation; a *manzana* equals an acre and three quarters, more or less; an *arroba* weighs twenty-five pounds, and a *quintal* one hundred pounds.

Departments.	Number of fincas.	Manzanas planted.	Arrobas of suga
Guatemala	68	203	3,2
Escuintla	55	1,851	40,5
Sacatepequez	2	163	13,4
Chimaltenango	265	216	2,1
Sololà	16	214	1
Suchitepequez	20	312	7,9
Retalhuleu	31	305	4,2
Quezaltenango	23	249	
San Marcos	66	252	
Huehuetenango	513	112	3
Quiché	57	43	

Baja Verapaz	77	384	2,2
Alta Verapaz	61	157	4
Peten	71	127	
Zacapa	106	213	4,6
Chiquimula	505	605	56,2
Jalapa	135	1,800	1,0
Jutiapa	144	380	15,1
Santa Rosa	32	174	2,7
Totals	2,247	7,810	154,5
			@ $1.
Value			$270,548.

While this table is by no means exact, it shows fairly the amount of saccharine products and their distribution. It is curious to note how many very small plantations are reported from the Department of Huehuetenango yielding almost exclusively the coarse panela. In Chiquimula the large proportion of sugar is due to foreign enterprise. There the cane-fields are capable of irrigation from the Hondo or other streams, and the cane is chiefly a small red variety. Escuintla and Jalapa have nearly the same area of cane planted, but the former, by superior machinery, produces forty times the amount of sugar, and ten times as much panela. The cultivation at present is almost confined to burying the seed-cane and trashing, that is, stripping the lower leaves twice in a season. In the rich valleys of the Atlantic, cane will grow nine feet in as many months, will yield four tons of sugar to the acre, will rattoon freely for twenty years without replanting, and may be ground during nine months of the year. Much of the product of the cane is in Guatemala converted into aguardiente, or rum. With the exception of the experimental plantation to which I have referred, I

know of no sugar fincas in northern Guatemala, although there are several in similar situations in British Honduras.

It is a well-known saying in this part of the world that “Wherever mahogany will grow, there every tropical product will flourish; and wherever logwood grows, there you can produce the finest rice.” Cane certainly is no exception to this rule.

Coffee.—Second on the list may be placed coffee, both from the importance of the present product, and from its very excellent quality. On the coast the Liberian coffee flourishes, and as the berries do not drop as soon as ripe, the trouble of harvesting is much lessened. Most of the crop exported from Livingston goes to England, and it has up to the present time been difficult to obtain the best quality, except through England. In 1883, 404,069.39 cwt. of a value (at twelve cents) of $4,848,832.68 were exported. On this the Government levies a tax, varying year by year, proportioned to the harvest.

The present importance of the coffee interest is shown by the following table of the coffee crop, commencing October, 1883, and ending June, 1884: —

Departments.	Fincas.	Trees.	Crop
Guatemala	213	756,484	11,
Amatitlan	507	5,152,900	45,
Escuintla	104	5,914,850	38,
Sacatepequez	626	2,805,400	18,
Chimaltenango	47	3,511,839	27,
Sololà	82	2,287,525	27,

Suchitepequez	253	3,511,839	52,
Retalhuleu	598	5,129,857	33,
Quezaltenango	409	8,903,552	124,
San Marcos	177	1,595,488	45,
Huehuetenango	248	627,276	7,
Alta Verapaz	265	3,835,084	2,
Baja Verapaz	54	900,856	
Peten	101	18,545	
Zucapa	91	56,410	
Chiquimula	1,000	908,670	6,
Jalapa	96	30,210	
Santa Rosa	560	4,354,428	26,
Totals	5,431	60,301,213	495,

If the figures of this table are correct, the average yield throughout the republic is 0.82 lb. per tree; in Escuintla .65 lb.; in Santa Rosa .60; in Guatemala 1.5; in Quezaltenango and Peten the same; in Alta Verapaz .75; and in San Marcos .40,—figures which show a very large number of non-bearing trees.

Coffee is planted in the shade, and the young plants require the protection of banana or other trees until well established. Plants are set ten feet apart each way, and topped when about six feet high. The Liberian variety is large beaned, and although of a lower price than the best Arabian, is more prolific, and in the lower lands, where the latter does not do well, is certainly more profitable.[53] It begins to bear the third year, produces three to four hundred pounds per acre in the fifth year, attains its maximum in the tenth, and is old in the thirtieth. Coffee exhausts the soil more than any crop except tobacco.

Cacao.—All through the forests of the Atlantic coast cacao grows wild, and even in this condition generally of choice quality. On the Pacific coast are the chief plantations, although the amount exported is insignificant (1,492 lbs. in 1884). Just over the Mexican boundary, in the province of Soconusco, grows the most celebrated cacao known; and probably careful selection of seed and cultivation would produce the same results in Guatemalan territory. Throughout the republic there is probably less cacao raised than before the Conquest, when the nib was current as money, and chocolate a royal drink. Like the coffee-tree, cacao requires protection, [54] which must be continuous, for the cacao never outgrows it; but a thin shade such as the India-rubber affords will answer very well, and in this case the *madre cacao* is profitable. A cacao-plantation should be in full bearing about the seventh year; and while the curing of the pods requires much care and experience, the cultivation of the trees is very simple. The many varieties and the interesting process by which the bean is prepared for market are well described in the pamphlet to which reference has been made. Plantations in the valleys of the Polochic, Chocon, and Motagua would yield a rich return. In Guatemala are several factories for preparing chocolate from the bean, and I have seen samples of very high quality. It is generally, if not always, flavored with cinnamon, and when used as a beverage is churned or beaten into froth.



Theobroma Cacao (Chocolate Tree).

A *Enlarged flower.*

B *Stamens and pistil.*

C *Andrœcium.*

D *Petal.*

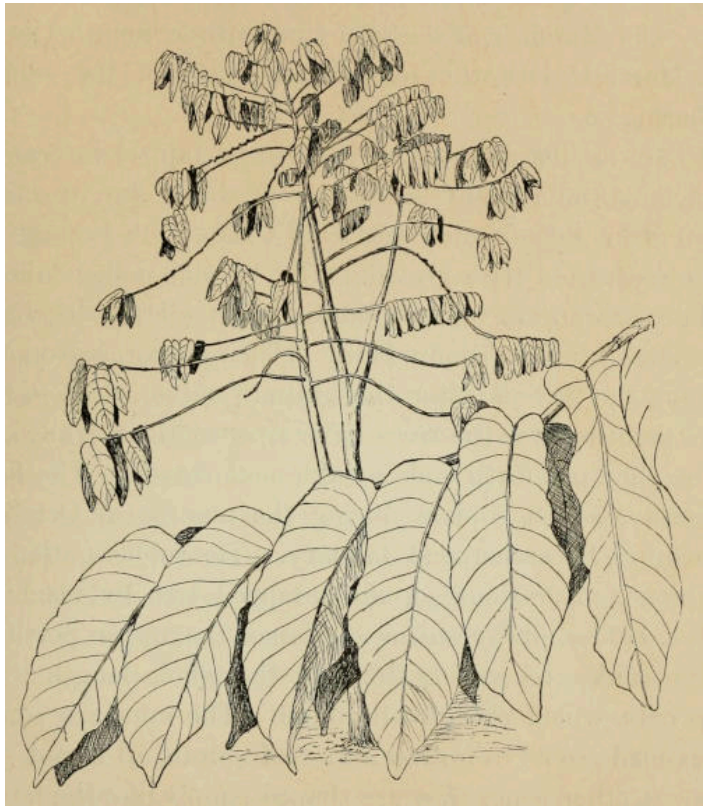
E *Ovary, vertical.*

F *Ovary, transverse.*

G *Pod section.*

H *Ripe pod.*

India-rubber.—Like the cacao, the *Castilloa elastica* grows wild in all the coast valleys; but although the Government has placed a bounty on plantations of this very desirable tree, few have been formed. Now, as formerly, the Indios collect the gum in a very wasteful way, and soon the supply will be greatly lessened. I am tempted to quote from Juarros[55] what I believe is the earliest notice of the use of India-rubber for waterproof garments. “On pricking the trunk of this tree [ule] an abundant juice issues, which serves, as Fuentes assures us, to coat a boot, with which one can pass a stream or a swamp dryshod.”



Castilloa elastica (India-rubber Tree).

The castilloa grows to a height of about forty to fifty feet, and its clean, smooth stem may be two feet in diameter at the base. The leaves are large, oblong in shape, and rather hairy. The foliage is light green in color, and not very dense. The small greenish flowers appear in February and March, and the seed ripens three months later. Mr. Morris[56] gives the following account of the rubber gathering:—

"The castilloa rubber-tree is fit to be tapped for caoutchoue, or the gummy substance produced by its milk, when about seven to ten years old. The milk is obtained at present, from trees growing wild, by men called rubber-gatherers, who are well acquainted with all the localities inhabited by the Toonu [ule]. The proper season for tapping the trees is after the autumn rains, which occur some months after the trees have ripened their fruit, and before they put forth buds for the next season. The flow of milk is most copious during the months of October, November, December, and January. The rubber-gatherers commence operations on an untapped tree by reaching with a ladder, or by means of lianes, the upper portions of its trunk, and scoring the bark the whole length with deep cuts, which extend all round. The cuts are sometimes made so as to form a series of spirals all round the tree; at other times they are shaped simply like the letter V, with a small piece of hoop-iron, the blade of a cutlass, or the leaf of a palm placed at the lower angle to form a spout to lead the milk into a receptacle below. A number of trees are treated in this manner, and left to bleed for several hours. At the close of the day the rubber-gatherer collects all the milk, washes it by means of water, and leaves it standing till the next morning.

He now procures a quantity of the stem of the moon-plant (*Calonyction speciosum*), pounds it into a mass, and throws it into a bucket of water. After this decoction has been strained, it is added to the rubber milk in the proportion of one pint to a gallon, or until, after brisk stirring, the whole of the milk is coagulated. The masses of rubber floating on the surface are now strained from the liquid, kneaded into cakes, and placed under heavy weights to get rid of all watery particles." It is true that either very heavy weights are not handy, or the honest Indian wishes to sell water at the price of rubber; for the masses, as I have examined them freshly brought in for sale, contain a large quantity of water held mechanically in the interstices. Alum is sometimes used to coagulate the milk, but is thought to render the gum hard and less elastic. A full-grown tree should yield about eight gallons of milk when first tapped,—which is equivalent to sixteen pounds of rubber, worth from ten to twelve dollars. Although the law of Guatemala forbids the tapping of young trees, and tries to regulate the frequency of the attack, it is ineffectual to prevent the gradual destruction of the wild trees through improvident bleeding, and only the establishment of private plantations will prevent the final extinction of this most valuable source of rubber. The Para rubber (*Hevea brasiliensis*) grows only in swamps unfit for cultivation; the true rubber (*Ficus elastica*), so popular a house-plant, does not seem to thrive and yield a supply of rubber away from its native East Indies; and the Ceara rubber of South America (*Manihot Glaziovi*) is not of easy cultivation, so that the Castilloa certainly promises to be the tree, of the many known to produce rubber, most likely to supply in cultivation that useful gum civilized

nations cannot now do without, although the science of adulteration has progressed so far that an ordinary pair of so-called rubber boots contain hardly a spoonful of the pure gum, the rest being sulphur, coal-tar, and other matters.

The trees should be planted forty feet apart; and as the seed is very perishable, it should be planted, or at least packed in earth, as soon as gathered.

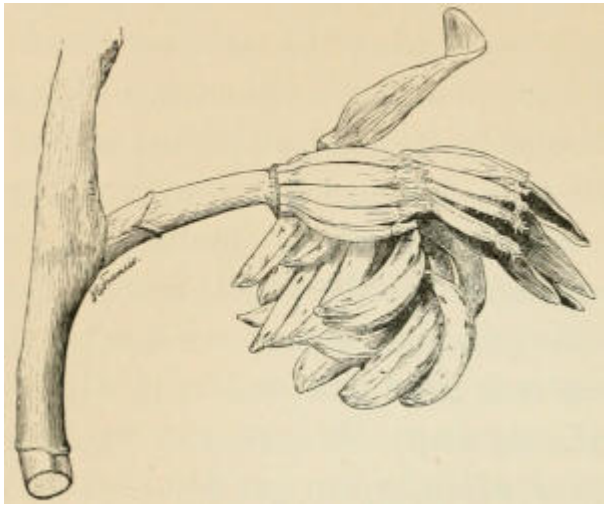
Sarsaparilla.—One of the most troublesome vejucos, or vines, common all through the forests of the Atlantic seaboard is the zarza, or sarsaparilla. Probably the American public is familiar with the popular remedies compounded in part with this valuable medicinal plant, which, belonging to the Smilax family, affects damp, warm forests, climbing to great heights over the trees. The portion used is the long, tough root; this the zarza-gatherer digs and pulls from the loose soil, replanting the stem, which in due time replaces its stolen roots, to be again robbed. The roots are washed, loosely bundled, and sold to the dealers, who have the fibres made up into tight rolls, a few hundred of which are then pressed together and sewed up in the thickest hide that can be found; for the "custom of trade" includes the wrapper in the tare of the more costly drug. Most of the sarsaparilla exported from Belize comes from Guatemala and Honduras; but from Livingston more than 60,000 pounds were exported in 1884, of an appraised value of ten cents per pound. The plant is easily propagated by cuttings or seeds, and of course needs no cultivation or clearing; the yield will average twenty pounds of dried root from each plant.

Bananas and Plantains.—No export from Guatemala has increased more rapidly in value than have the products under this head. The permanent

establishment of lines of steamers between New Orleans and Livingston, and the bounty offered by the Government, stimulated the planting of many small fincas along the shores and on the river-banks. Under contract with the steamship companies, the producer sells his bananas at 50 cents a bunch (of not less than eight hands) during five months of the year, and for 37½ cents the rest of the year. The cost of production may be placed at 12½ cents per bunch. All these prices are in silver currency of the value of the sham dollar of the United States. Plantains are sold at 25 cents a bunch of twenty-five, sometimes commanding $1.25 per hundred. The profits of this business go, as usual, not to the producer, but to the middle-man or the steamer-companies. For example, a man raises a hundred bunches of good fruit; the cost to him is $12.50 delivered on board the steamer. He is paid in the best season $50 in silver, for which he can get $40 in American gold. The steamer people, after a voyage of four days, during which all their expenses are paid by the passenger-list and the Government mail-subsidies, sell the bananas on the wharf in New Orleans for $125 in gold, or its equivalent,—clearing $85; while the planter, for a year's labor put into the bananas, gets $30. I have put the price paid the planter at the highest, and the sales in New Orleans at the lowest. The loss is insignificant at these figures, and it is not uncommon for the profits of a single round trip of two weeks to exceed $40,000. Half this shared with the planter would make him rich.

If the planting of bananas is to profit the grower, he must raise enough—say twenty thousand bunches a month—to freight his own steamer, and be independent of the present monopolies of the Italian

fruiterers. The extent of this business is seen in the fact that from Livingston in 1883 were exported 29,699 bunches, and in 1884, 54,633, or nearly double the amount.



Bunch of Plantains (young).

This is not the proper place to enter into a detailed history of the banana, its culture and its varieties; but there is much uncertainty in the Northern markets as to the distinction between bananas and plantains, which it may be well to remove. At present plantains are not brought to the Boston or New York markets. Botanically, it is difficult to distinguish between these two fruits, as connecting varieties run imperceptibly into the two extremes; no one, however, would ever mistake a typical plantain for a banana, either single or in bunch. Of all the varieties of the banana (and I have myself seen at least two hundred, including the seeding-banana of Chittagong), only two or three are raised for exportation in Guatemala, and these are by no means the best; but as the steamer people will give no more

for a choice variety, there is no inducement to improve the stock. Both yellow and red varieties are grown, and the former sometimes have two hundred and fifty bananas on a bunch, weighing, unripe, ninety pounds. The plantain is yellow when ripe (I have never seen a red variety), and is much larger and more curved than a banana, while the bunches are looser and much smaller, seldom numbering more than thirty-five fruits. Some plantains attain a length of fifteen inches, and some are quite palatable uncooked; but the usual way to eat them is either baked or fried. Few of our Northerners appreciate the wonderful nutritive qualities of the plantain, which in this respect surpasses the banana; and it may be authoritatively stated that sixteen hundred and seven square feet of rich land will produce four thousand pounds of nutritive substance from plantains, which will support fifty persons, while the same land planted with wheat will support but two. When the plantain is dried, it will keep from twenty to thirty years; and if dried before ripening, an admirable meal (better than arrowroot) can be made from the ground white fruits, while the ripe fruit forms a conserve not unlike a fig in flavor, and of course free from the seeds so troublesome in that fruit. One hundred parts of the fresh fruit contain twenty-seven parts of nutritive matter, easily digested and superior to pure starch. The comparative cost and profit of the two fruits may be thus stated:—

		Banana.	Plantain.
Cost of one acre of land	$1.00		
			15,000

Clearing and planting	20.00		
430 stools	2.50		
Care to first crop	10.00		
Shipping	10.00		
	$43.50	$106.50	$144.00

The second year the increase would be in favor of the plantain, and the product has reached more than thirty-five thousand per acre. Of the fibre no account has been taken, although this bids fair to become an important by-product. The plantain contains more fibre than the banana,—the inner portion in both stems being much finer. At present the possible four pounds of fibre in each stem is wasted; and as the stems should be cut to the ground after the fruit is gathered, these large fibrous trunks are much in the way of cultivation. It will be remembered that the Manilla hemp is the product of a species of banana (*Musa textilis*).

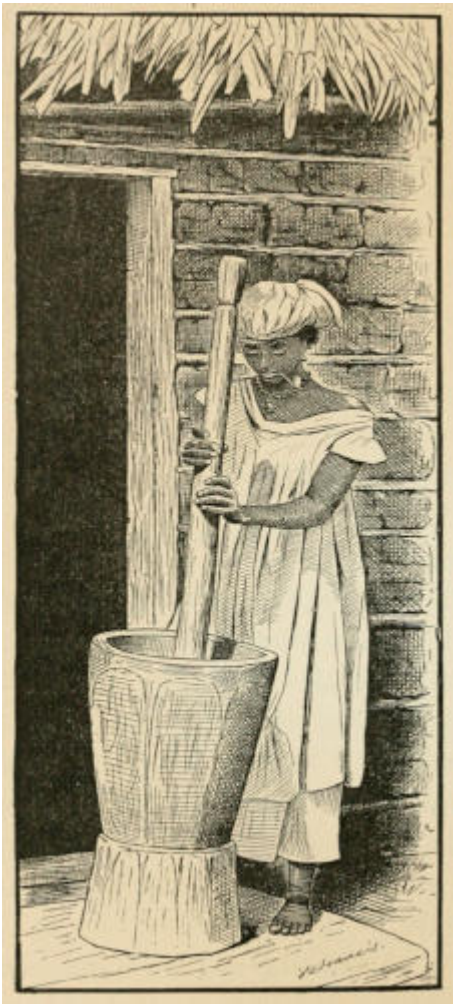
Usually bananas or plantains are planted in a cafétal or in a cacao or orange orchard, to shade the young plants, and after three or four years are removed as the more permanent trees attain their growth. All the fruit exported must be cut and shipped while quite green and not fully grown; and this, conjoined to the tar and bilge smell of the steamers, certainly gives the fruit a flavor it does not have in its native land when allowed to attain its full growth and then slowly ripened under shelter from the sun. Bananas, like some pears, should not be allowed to ripen on the trees.

There are two articles of food and commerce

which should certainly attract the attention of merchants, and so of the public, in our Northern States,—fresh plantains, as a most nutritious and delicious vegetable, more costly than the banana, though of easier transport; and the dried plantain, for which there is already an increasing market on the Pacific coast.

Pita and Sisal Hemp.—The mention of the plantain-fibre calls to mind two very valuable fibrous plants at present little cultivated in Guatemala, except for home consumption. The *pita*, or silk-grass (*Bromelia pita*) belongs to the pineapple family, and is very commonly used for hedges in the interior of the country. The long sharp leaves are rotted, and the fibre extracted by the rudest means, usually by pounding on stones in a running stream; but the product makes most durable and desirable hammocks and bags and cords. The other plant is most cultivated in Yucatan, whence the name Sisal hemp, from the shipping port. It is also called henequen (*Agave ixtli*), and much resembles the century-plant. Common over the mountain-ranges, certainly to a height of eight thousand feet, it is little used, except for hedges. From Yucatan it is exported to the annual value of $500,000. The ixtli grows in poor dry soil and is easily propagated by cuttings. An American machine removes the pulp and cleans the fibre at the rate of a leaf a minute, and the product is then baled and shipped without further trouble. The fibre, according to the “Textile Record,” costs the planter two thirds of a cent per pound, the freight to New York is three quarters of a cent, and with commissions and incidental expenses, the total charge per pound is a cent and a half, and it sells for from five to seven cents per pound. In the English market Sisal hemp is quoted at £30 per ton.

The species and varieties of the agaves or henequen and pulque plants are not clearly distinguished; but two types are tolerably distinct. *Agave Americana*, or maguey, is cultivated in Mexico for the juice which when fermented is called pulque. The plant after some years of growth in a stemless condition throws up a stem very rapidly to a height of forty feet, or even more. The Mexican cultivator, however, nips this stem before it has attained two feet; and scooping a large hollow in the cut stump, waits for the sap to collect. The yield from a vigorous plant—and the sap continues to run for three months—is from two to three hundred gallons! The agave, it must be remembered, grows in the driest soil. The fibre of the leaf is very strong, and is used to make paper of the toughest and most durable kind.



Pounding Rice.

The *Agave ixtli*, or henequen, is larger than the last species. When the plants are three years old the leaves may be cut, and a good plant should yield from fifty to a hundred leaves annually, the cutting being repeated every four months. The continuous fibres in a leaf are sometimes five and a half feet

long, and are used by the natives without spinning. The life of the ixtli subjected to this pruning and not allowed to flower, may extend to ten years, but usually is several years less.

Bromelia pita produces a much finer and stronger fibre, but is not so easy to handle. As these fibres come to market they are often confounded, even by the Indios, and the term “pita” is not infrequently applied to the product of agaves, and even of plantains.

The genus *Fourcroya*, closely allied to agave, also yields valuable fibres.

Rice.—The upland variety grows remarkably well in the bottom-lands of the Chocon River, producing two crops a year of very heavy rice. All through the logwood country it might profitably be cultivated; but up to the present time not enough has been raised fairly to determine how much the yield per acre may be. There are no suitable rice-mills, and the grain is hulled by the rude and wasteful method of pounding in mortars.

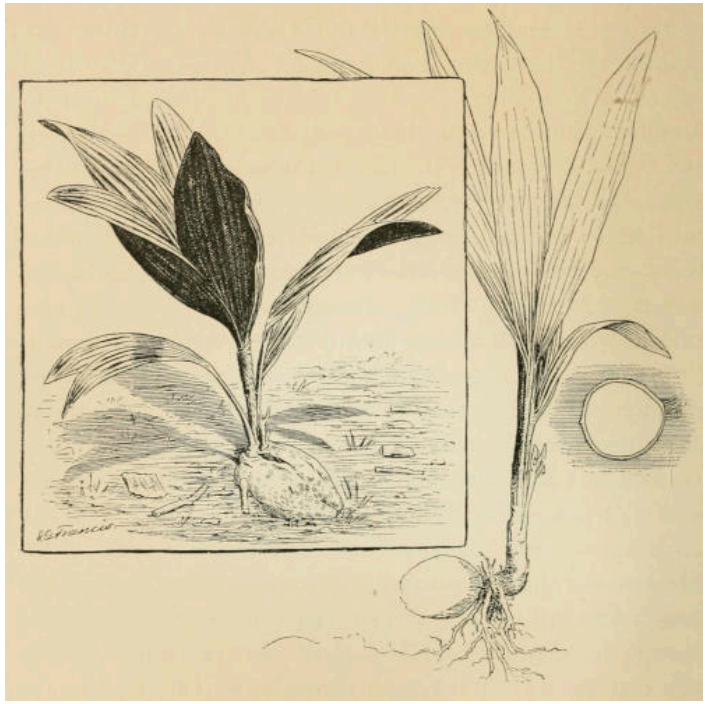
Oranges.—The delusion which has led so many to plant orange-trees on the frost-visited sand-banks of Florida has at least turned the attention of Americans to the desirability of orange-walks not too remote from our principal fruit-markets. The Florida oranges, while sweet and juicy, are wanting in flavor, especially the mandarin variety, which is far inferior to the fruit of that variety raised in China. Even the Louisiana oranges, which are generally superior to those from Florida, are not first-rate, and in both States I have seen the foliage utterly destroyed by frost,—an accident which must seriously interfere with the succeeding crop. As a substitute for these unsuitable regions, Guatemala

offers great advantages. At Teleman, on the Polochic, the quality of the uncultivated fruit is nearly equal to the Syrian oranges; that is, finer than any I have seen in Jamaica or the West Indies generally,—and the same fruit can be raised on all the bottom-lands of the Atlantic coast. Lemons do not do so well, as this fruit requires a cooler climate and must be relegated to the higher interior valleys; but limes grow wild in remarkable perfection, being often used as hedge-plants. Raised from seed, the plants at three years are six feet high, and in five are bearing. On the western side limas, or sweet lemons, citrons, and toranjas, or shaddocks, grow very well. Oranges of many varieties can be grown in the greatest perfection in the rich valleys; and yet it is difficult to obtain oranges enough for home consumption even where the alcaldes are not so stupid as one reported during the cholera scare in 1884, who ordered all the orange-trees in his village to be cut down, as their fruit was sure to cause cholera! Along the coast of Honduras, near Trujillo, I have bought for one dollar a barrel the finest limes I ever saw.

Coconuts.—On the sandy shores, where no other fruit will grow, the coconut flourishes. As a rule the nuts are not so large as those of the Pacific Islands; but I have seen some of good size on the north shore of the Island of Roatan. The low, sandy cayos and the equally low shores of Manabique are admirably suited for coconut-walks. In one place on the Hondureñan coast a large factory was established at great cost, but for some reason not known to the writer it has been abandoned; and now, nowhere on the northern coast of Guatemala is any organized attempt to prepare either the oil or fibre (coir or cobre), and the nuts are shipped to the United States or to England. Prolific bearers, these palms require

no care after they come into bearing in the fourth year; and as they bear heavily by the seventh year, a young walk soon becomes a source of profit. Usually a tree produces a flower-spathe every month; so there are generally on a tree nuts in all stages. On a single spadix I have counted five thousand nine hundred and fifty staminate or male blossoms, and fifty-two pistillate or female. Of the latter not more than thirty, and usually only twenty, develop into nuts; but a young tree in a good soil will probably bear three hundred and sixty nuts per annum, worth $9. In a walk, however, it is a good tree that is worth $3 per annum.

The trade in green nuts is of course limited; but they usually sell at the rate of two cents apiece. No more delicious drink is found in the tropical fruits than the rich milk of the nut when so green that the shell is easily cut with a knife. When fully ripe, the nuts may be piled in a damp place and left to germinate. The milk disappears, and its place is occupied by a porous mass completely filling the cavity and of the consistency of sponge-cake, quite edible withal. As the shoot pushes through the eye and breaks through the thick husk, the innocent-looking sponge seems to absorb the meat of the coconut; when this is finished, the plant has, as it were, hatched itself from the old shell, and is ready to continue life on its own basis. The coconut presents a good illustration of the development of pinnate or feather leaves from palmate (or leaves shaped like a fan),—all the early leaves of this palm being of the latter class, while the noble leaves of the mature palm are long pinnate.



Growth of a Young Coconut.

If the trees are planted about sixty to the acre in ordinary situations, such a plantation should not cost, including the land, more than forty dollars until the trees bear; and in eight years the planter may expect a crop of at least eight thousand nuts annually,—which should net him about two hundred dollars. It is a great mistake to plant the nut on the surface of the ground, as it is liable to be overturned by the winds, or too thick, as it then grows tall and spindly, and bears poorly.

The exports of coconuts from Belize during six years previous to 1882, as given by Mr. Morris,[57] are shown thus:—

1876	381,000
1877	604,000
1878	698,000
1879	919,000
1880	1,623,000
1881	6,047,160

A remarkable increase, that shows that the profits induce more extensive planting. As to the duration of a fruitful coconut, I have not sufficient data. I have seen old trees on Utila that had been growing less than twenty-five years, and I have seen trees still bearing on the shores of Hawaii which are distinctly marked with the cannon-balls Captain Cook's ships fired at the village of Kaawaloa after the great navigator's tragic death, more than a century ago; and these trees must have been well grown at that remote day. I may add that on the Hawaiian Group few coconuts bear before they are seven years old,—some not until they are fourteen.

Pineapples.—No systematic cultivation of this most delicious fruit has been undertaken in Guatemala, although the wild pines are of good quality. The *piña de azucar*, or sugar-pine, is large (over six pounds), and very tender and juicy; but the horse-pine has more flavor. On the Chocon plantation the pine-fields planted in the lighter soil do very well, but require cleaning five times each year. The sprouts from the base of the fruit are planted, and after two years the stock has spread so as to produce several pines annually. Three thousand plants to the acre should yield, at six cents per pine, a hundred and twenty dollars the first crop, and a hundred and eighty dollars afterwards. Whether these fine fruits can profitably drive the inferior pineapples of the West

Indies from our markets, is yet doubtful. A wild pine, in which the fruit is not crowded into a compact head, but is more acid and of less flavor, is common in the mountains; but I have never seen this species offered for sale.

Nutmegs.—While I do not know of a dozen trees of the nutmeg, outside of the Chocon plantation, the soil and climate are admirably suited to this tree. The nutmeg requires at least eighty inches of rainfall per annum, begins to bear when eight or ten years old, and improves for a century. The first few years the yield is from one to five thousand nuts, of from sixty-eight to one hundred and twenty to the pound. In the Botanic Gardens, Trinidad, the net yield per tree has been more than twenty pounds (say eighteen hundred nuts), with an average price of fifty-four cents per pound. This would amount to three hundred and fifty dollars per acre. The value of the mace is additional. In the Chocon region the trees have not yet matured; but there seems no doubt that the conditions of growth and fruitfulness are better than on the Island of Trinidad, and with these trees planted thirty feet apart, or forty-five to an acre, allowing one third to be male or barren trees, we should have at least 1,600 × 30 = 48,000 nutmegs to the acre. Averaging the nuts at ninety to the pound, the crop would weigh five hundred and thirty-three pounds, and at fifty cents per pound would amount to two hundred and sixty-six dollars. Considering the less expense for care this permanent crop would require, the profit would be sufficient even at forty cents per pound. The red, fresh mace does not bring so high a price as when old and golden-colored.

Maiz.—Indian corn (*Zea mays*) grows well all over

the republic, and forms the most important food of the Indian tribes. Yet the kinds cultivated are not of fine quality, although growing freely. The stalks are often a dozen feet high, and three ears are not uncommon. Three crops can be raised annually. The corn is always stored and transported in the husk. When the Spaniards first came among the Central Americans, they found the milpas of maiz carefully cultivated; and as to-day the little cornfields are found all over the country cultivated precisely as the ancients were doing centuries ago, so the product is to-day prepared and eaten in the same old-time manner. Mr. Belt,[58] in his work on Nicaragua,—unfortunately too little known,—describes the preparation of maiz better than I have seen done elsewhere. He says: “In Central America the bread made from the maiz is prepared at the present day exactly as it was in ancient Mexico. The grain is first of all boiled, along with wood-ashes or a little lime. The alkali loosens the outer skin of the grain, and this is rubbed off with the hands in running water; a little of it at a time is placed upon a slightly concave stone,—called a *metatle*, from the Aztec *metatl*,—on which it is rubbed with another stone, shaped like a rolling-pin. A little water is thrown on it as it is bruised, and it is thus formed into paste. A ball of the paste is taken and flattened out between the hands into a cake about ten inches diameter and three sixteenths inch thick, which is baked on a slightly concave earthenware [or iron] pan. The cakes so made are called *tortillas*, and are very nutritious. When travelling, I preferred them myself to bread made from wheaten flour. When well made and eaten warm, they are very palatable.”

Besides the importance of this grain for human food, it is necessary for the horses, who could not

well endure the hard steep roads on sacate alone. Much might be exported to the neighboring republics.

Wheat.—Throughout the uplands much wheat is grown. The straw is generally small, but the grain heavy and good. In the grain centres, such as Sololà, the wheat is inspected and weighed by Government officials. The seed is sown in drills rather than broadcast. I found the bread made from this home wheat of a uniformly good quality, though sometimes dark colored,—indeed it is superior to the bread found in the country throughout the United States.

Potatoes, and other Food-Plants.—However the philosopher may try to confine his attention to those products of a country which may have a commercial value, be he cynic or epicurean he will be interested in those fruits and vegetables not necessary to the support of life, but none the less very important factors in human comfort. I have briefly noticed the principal fruits that may be exported from Guatemala, and have passed unnoticed the scores of valuable woods, because I can add nothing to the general knowledge of these. For the same reason I have omitted the hundred and one drugs or medicinal plants; but I should fail in my duty to this pleasant country if I did not tell of some of those fruits and vegetables that add to the pleasure of life.

The common potato I have already mentioned in a former chapter (p. 136). The sweet potato (*Batatas edulis*) will grow in all its varieties, from the huge purple-fleshed tuber to the delicate little yellow form; but it is very little cultivated. The yam (*Dioscorea*) is much more common, but dry and tasteless. The cocos or kalo (*Colocasium esculentum*)

grows well in the wetter lands, but is more common in Belize than in Guatemala, and in neither place attains the prominence as a vegetable that it enjoys in the Pacific Islands or in China and the East Indies. The cassava (*Manihot utilissima*), so important a food in South America, is here mostly confined to Carib use, and I have never seen it inland or on the south coast; as a dietary its importance merits attention, and it should be exported. In a dry climate it keeps well, and I have specimens four years old still perfectly good. Frijoles, or beans, black, white, and red, are very abundant and good. The Mexicans are the greatest consumers of beans in the world, and their neighbors southward probably rank next.

The breadfruit (*Artocarpus incisa*) grows remarkably well in Livingston and Belize, although I think the fruit is smaller than in the Pacific islands. Carefully baked when full grown, but not ripe, it is a fine vegetable, and the baked fruit sliced and fried is a delicacy. The odor of the uncooked fruit is very unpleasant. Squashes, cucumbers (including a small spiny wild one which is very good), melons, grow well, and pumpkins are planted among the corn, as in New England. Indeed, the variety of squashes is very great, and one may see a dozen or fifteen kinds in a single heap. They are fed to cattle as pumpkins are with us. Some are so hard that they keep a long time. The *chiote* (*Sechium edule*) is a rapid growing runner, often covering the houses, and bearing a fruit about the shape of a pear and three inches thick, covered with soft prickles. This was abundant all through the villages, and in the plazas it was sold parboiled, fried, or preserved in sugar. It tastes much like a vegetable marrow.

Tomatoes grow everywhere, and are of great

importance in the kitchen, next to the universal chile (*Capsicum annuum*). Peppers of other kinds are used, especially a large green one which is stuffed with minced meat coated with egg and crumbs and served as *Chile relleno*. Pawpaws (*Carica papaya*) are common (a small wild species is abundant on the Pacific coast); and the fruit, as large as a cantaloupe, and filled with pungent seeds like those of the tropæolum, is eaten raw, or cooked in tarts. Its juice is of the greatest use in making tough meat tender. The akee (*Blighia sapida*) is much like a custard when cooked.

The avocado (*Persea gratissima*) is one of the fruits that have many names. In Peru it is called *palta*, and the Mexican *ahuacatl* was twisted by the Spaniards into *aguacate* and *avocado*, and the English corrupted this last into alligator-pear. Intermediate, like the carica, between vegetable and fruit, few strangers like the aguacate at first. There are many varieties; but the best is pear-shaped, weighing about a pound, with a shiny purple, leathery skin. Between the skin and the rather large kernel is a greenish pulp nearly an inch thick, which is the edible part of this delicious fruit. It is of a buttery consistency, and may serve as substitute for butter, and be eaten alone, or with salt and pepper. The sapote (*Lucuma mammosa*) somewhat resembles the aguacate in the size and position of the edible pulp; but the outside is rough and brown, and the salmon-colored interior is insipid and inferior.

Among the first rank of fruits may be placed the mango (*Mangifera indica*), although the West Indian is far inferior to the East Indian representative. As a mere shade-tree the mango is beautiful; but the rich juicy, golden-meated fruit, slightly tinged with a

flavor of turpentine in the poorer sorts, is a never-to-be-forgotten delight. The unripe fruit is good baked or made into a sauce, when it much resembles apples in taste. The slippery, juicy meat, and the strong fibres which attach this to the large flat stone, make it anything but an easy task for the novice to eat this fruit; he should have plenty of water and napkins within reach. When the tree does not bear well, root-pruning may be resorted to, although the natives usually hack the stem. I have planted seeds of the sour mango sent from Hawaii, and they have grown rapidly and promise well. The mango may be grafted as easily, it is said, as the cherry or apple.

The icaco (*Chrysobalanus icaco*), or coco-plum, grows near the shore, and makes an excellent preserve; so does the manzanilla, a small crab-apple.

In the interior, a tree very commonly used for fences is the jocote (*Spondias purpurea*?). This bears a plum-like fruit all over the smaller branches, which is either yellow or red when ripe, and very juicy. The stone closely resembles a medium-sized peanut. The juice when fermented makes a very popular drink (*Chicha*). To propagate the tree it is only necessary to plant a branch or cutting, which may be several inches in diameter, and it takes root and bears the next season. I am not sure of the species of spondias, but it is much smaller than the *S. dulcis* of the Pacific Islands, and more like the hog-plum of Jamaica. Peaches grow in the highlands, but of the poorest quality, and the trees are in blossom and fruit at the same time. Figs grow very well; yet the Guatemaltecans import canned figs from New Orleans. The star-apple (*Chrysophyllum cainito*), so popular in the West Indies, the mangosteen (*Garcinia mangostana*), the most delicious fruit of the East

Indies, the loquat (*Eriobotrya japonica*), the durian (*Durio zibethinus*), that foul-smelling but pleasant-tasting fruit, the bhêl (*Ægle marmelos*), the Marquesan plum (*Spondias dulcis*), and a host of others might grow here, but do not.

Guavas or goyavas grow wild, but are of very poor quality; I have not found the very fine strawberry guavas, but have planted seeds of the black guava, the best of its kind. Cherimoyers (*Anona cherimolia*) are very common in the uplands, extending even into the region of occasional frosts. A red-pulped variety is much prized. The sour-sop (*Anona muricata*) is cultivated all along the coast, and is seldom absent from a Carib village. Grapes grow finely on the Pacific slope, and would probably do equally well on the north. That most pleasing fruit of the passion-flower (*Passiflora sp.*), the granadilla, or water-lemon, may be found, in the season, for sale in every plaza in the highlands. The more common kind is of the size of a large hen's egg, and the tough shell contains an aromatic jelly of which one can eat almost without limit; this fruit is sold at ten for a cuartil (3 cents). The larger species has a fine purple blossom as large as a saucer, while the fruit is more than a foot long. These vines are easily propagated by cuttings. The tamarind (*Tamarindus officinalis*) is found all over the country, and its pulpy pods make a wholesome and cooling drink. There are many other fruits which I have not tasted and cannot describe; but they are generally those that a stranger does not especially like, nor are they abundant. While our common garden vegetables can be easily raised, if kept from ants, especially from the ravages of the zompopos, there are few gardens that contain any of them.

With food for man, it is important to provide well for his faithful servants, horses, mules, and cattle. On the uplands the pasturage is good, and the sheep and neat cattle thrive. On the lowlands and in the river valleys grass must be planted, and the Guinea grass (*Panicum jumentorum*) and Bahama grass (*Cynodon dactylon*) are usually chosen. On the ridges *Paspalum distichum* grows naturally, and in the interior the grass is the same, I am told, as that of the famous plains of Yoro, Olancho, and Comayagua in Honduras, where one acre will pasture two animals, while in Texas four acres will barely feed one.

The fauna of Guatemala has been almost as much neglected as the flora; but although insect-life seems abundant, and many of the rivers swarm with fish, I believe that animal life is comparatively scarce. Game certainly is, red-deer, peccaries, javias, turkeys, and pigeons being almost the whole bag. Among the mammals the monkeys are here fairly represented, the little white-faced (*Cebus albifrons*) being the most attractive. This monkey has a face nearly devoid of hair, and as white as a European. The hands and feet are very well formed, the nails especially so, and the tail is quite long. It seems less difficult for him to stand erect than for most monkeys, and when domesticated (an easy process) he is an affectionate pet. The howling-monkeys (*Mycetes stentor*) will be remembered by every traveller as the noisiest of the nocturnal animals. Several other small *monos* are common in the forests (*Simia apella*, *S. fatuellus*, and *S. capucina*), where they feed on wild-figs and other fruits. The pezote (*Nassua solitaria*) is found in the forests of the eastern mountain-ranges.

The manatee, or lamantin (*Manatus Americanus*),

once found in the Golfo Dulce, is now seldom, if ever, seen on the coast of Guatemala, although still found in British Honduras, where the hide is used for whips, canes, etc. I have seen the tracks of the danta (*Tapirus Americanus*) in the Chocon forests, but never the animal, as its habits are more nocturnal than mine. Conies (*Lepus Douglassi*), taltusas (*Geomys heterodus*), mapachines (*Procyon cancrivorus*), and armadillos (*Dasypus sp.*) are common articles of food among the Indios. Red-deer (*Cervus dama*) are found in the interior. Peccaries (*Jabali*, *Dicotyles tajaçu*) feed in droves in the bottom-lands, and are perhaps the most dangerous of the wild animals of Guatemala; their sharp tusks will cut terribly, and the little beast is too stupid to be frightened away when thoroughly angered. It is said that even the jaguar fears to attack a drove, but skulks behind, hoping to pick up a straggler. They can, however, be tamed, and I have seen them with domestic pigs about the streets of San Felipe, Pansos, and other places. The white-lipped peccary, jaguilla, or warree (*Dicotyles torquatus*), makes its presence known at a considerable distance by the peculiar odor emitted from a small pouch on its back. The hunter, when killing, takes care to cut this sack out at once, or it would quickly taint the entire body of this otherwise good pork. In the open forests I have often found peccary tracks, but never unaccompanied by the full, round print of the jaguar. When pursued, the peccary takes readily to the water, and swims rivers. The jaguar, or tigre, as he is always called in Central America, is not a very dangerous animal, as he fears man much more than man fears him. The tigre is especially fond of dogs, and will enter a house at night to carry off the prized morsel; sometimes when hungry he will persistently resist all efforts to drive

him away from a house-yard, and one of my monteros was attacked by one when sleeping in the forest. In this case the tigre was in complete darkness, and was badly gashed by the man's machete; but so far from being frightened, he actually pursued the montero more than a mile to the nearest house, where a gun was obtained and the wounded animal shot. I have seen skins between five and six feet long, exclusive of head and tail. The puma (*Felis concolor*) is more common in the mountain regions, and the "lion" that descended from the Volcan de Agua and ravaged the country about the young City of Guatemala (*antigua*) was of this species. The ocelot (*Leopardus pardalis*) and coyote (*Canis ochropus*) are also found in the interior.

Of creeping things the warm regions of the earth are supposed to be prolific. I had been told of the terrible serpents,—the boas that hung from the trees and whipped up deer, the deadly tomagoff, and others, until I was ready to see their folds around every tree, or their coils under every bush. I was to be deprived of a swim in the rivers and lakes because of the alligators, and I must beware of scorpions and centipedes. Now, in fact, the alligators are few in number, small in size, and very deficient in courage. There are a hundred in Florida to every one in Guatemala, and I seldom got a shot at any; I was able to kill only one, and he was not over seven feet in length. A much larger one came ashore to lay her eggs near a house on the Chocon plantation, and was killed. The musky odor of the alligator is very strong during the breeding season, and the eggs (which are eaten by the Caribs) have a very strong flavor. They are small,—less than three inches long,—alike at each end, and rough; when dry, the shells contract, and finally split in spiral strips. Young alligators, not

more than a foot long, are eaten, it is said, by the Indios.

The iguana I have already described. So abundant are these delicious reptiles that they are sometimes brought to Belize by the dory-load; and one may see several hundred Caribs each carrying home one or two iguanas, still alive, but with toes tied together, over the back. Of other lizards there are many kinds, from the harmless little fellows which make a squeaking in the thatch at night, to the long-tailed, crested lizards which rob the hens' nests and even make way with the small chickens. Fresh-water turtles are abundant, and one, the *hikatee*, is excellent eating; so are its eggs, of the size of a pullet's, of which some two or three dozen are found in a nest six or eight inches below the surface of the sand. The sexes are easily distinguished by the shape of the tail, the female having a shorter and thicker one. The sea-turtle (including the hawksbill, so valuable for the tortoise-shell) are very abundant, and are caught in seines by the use of floating decoys. Some of these turtle weigh one hundred and fifty pounds, and their steaks are white and tender as the best veal. I have never been on the shore at the egg-season, and so can say nothing of the taste; but I am told they are much inferior to the eggs of the iguana. It is a common thing to capture sea-turtles which have had a flapper bitten off by sharks, and usually the wound has healed well, the soft scales covering the stump completely.

Of the frogs, the most troublesome are those which get into the cisterns or behind the water-jars, and make a very loud and disagreeable noise.

On the Atlantic coast snakes are much less common than on the Pacific. Two long, slender

snakes, quite harmless,—one green, the other reddish-brown,—are seen once in a while; but although the natives believe that all snakes are poisonous, only the tomagoff,—a short, thick snake of dark color,—the rattlesnake, and the coral snake are really venomous, and these are rarely seen. Stories are told of boas seen lying across a road with head and tail concealed in the trees on either side; but they lack confirmation, and perhaps may be classed with the absurd snake story told by Juarros. [59]

The supply of fish is good. The saw-fish grows to a great size, and its teeth are very long and sharp. The jew-fish is large, weighing several hundred pounds, and is good food. Snappers, mullet, bone-fish, king-fish, and a score of others of which we know only the local names, including one with solid red meat, are found in the rivers and bays. Of crustaceans, the crayfish takes the place of the lobster, and a small crab is common among the mangroves and in swampy forests; larger crabs come to the shores in breeding-time, but not in such numbers as at Belize.

Scorpions are large and dreaded; but their sting is not more painful than that of a hornet, and they are sluggish, and not abundant even in their chosen haunts. Centipedes are seen on the tree-stems, and many are drowned during the rains. This articulate is by no means quick in its motions, and falls a prey to the agile cockroach.

Spiders are abundant, both in species and individuals; and Mr. Frederick Sarg, of Guatemala, has drawn most beautifully, and carefully described, many new species. The hairy tarantula is the most dreaded; but others found on the rocks by the river-sides are perhaps larger.

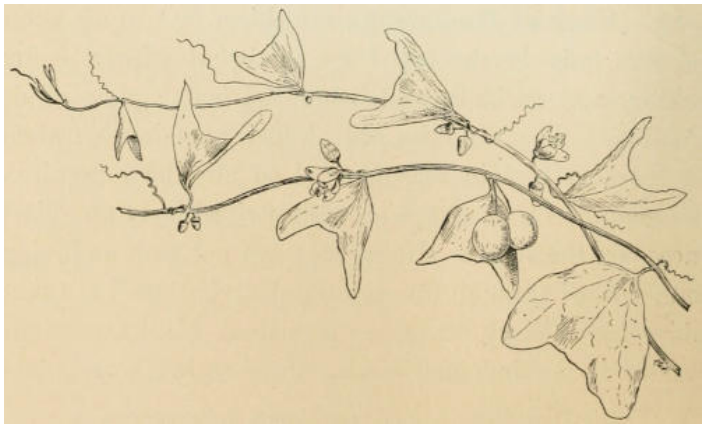
The birds of Guatemala are of great beauty; and the quetzal (*Macropharus mocino*), the pavo (*Meleagris ocellata*), and the curassow, are perhaps unsurpassed in splendor of plumage. The wild turkey was supposed to be peculiar to Honduras, but has been found in Verapaz. Toucans with enormous bills and brilliant colors, parrots even more brightly colored, especially the guacamayo (*Psittacus macao*), and many species of humming-birds, frequent the river-banks; the palomas, or doves, and the social and noisy yellow-tails are on the trees, especially the qualm (*Cecropia sp.*); the white cranes and the great pelicans frequent the shoals; the johncrows (*Cathartes aurea*) congregate on the trees about the towns and serve as scavengers; and owls, hawks, and eagles are distinct elements of the Guatemaltecan avifauna.

Not less brilliant than the birds are the lepidoptera. The superb blue butterfly (*Morpho sp.*) flits among the trees with its wings spreading nine inches; with this are smaller relatives,—black, blue, carmine, and yellow; some with swallow-tails (Papilionidæ), others short and broad. Among the beetles are two of immense size,—the Hercules beetle (*Dynastes Herculis*) and the harlequin (*Acrocinus longimanus*); the former attains a size of five inches in length, and the latter infests the rubber-trees. Another beetle—one of the Elateridæ (*Pyrophorus nyctophorus*)—gives a most brilliant and constant light, quite as bright as the *cacuyo* of the West Indies. All through the highlands wasp-nests of large size and curious form are seen in the trees; ants also build mud-nests in the trees and on posts. Many chapters might be written of the habits of the Central American ants, which are perhaps the most abundant of indigenous insects,—the little “crazy ant,” which

runs rapidly in all directions, seemingly without any object; the zompopos, or leaf-cutters (*Œcodoma*), whose trains are seen all through the forests, bearing above them the great sail-like fragments of leaf they have cut to stock their homes; the comajen (white ant), which destroys dead-wood and is intolerant of light; the fire-ant; and many others. The zompopos are very destructive in the vegetable garden, and indeed would quickly destroy a cacao, orange, or coffee plantation if allowed to establish their immense burrow in the midst. Some of the burrows are thirty feet in diameter, and can only be destroyed by persistent efforts,—fire, coal-tar, and carbolic acid being the best agents of destruction.[60] The sandflies are almost unendurable along the coast at certain seasons, and so are the mosquitoes (the genuine *Culex mosquito*, with striped body and black lancet) on the rivers. House-flies are not seen at Livingston; but all through the country the "botlass" is a pest. A bite by this fly leaves a persistent black spot, surrounded by an inflamed circle. Jiggers, beef-worms, and coloradias are troublesome about the towns and where there is uncleanness. The garrapatos (*Ixodes bovis*) are often found on horses and other animals, and when full are as large as a coffee-bean. Man does not escape this pest; but they are so large that they are easily picked off, especially if one has a monkey.

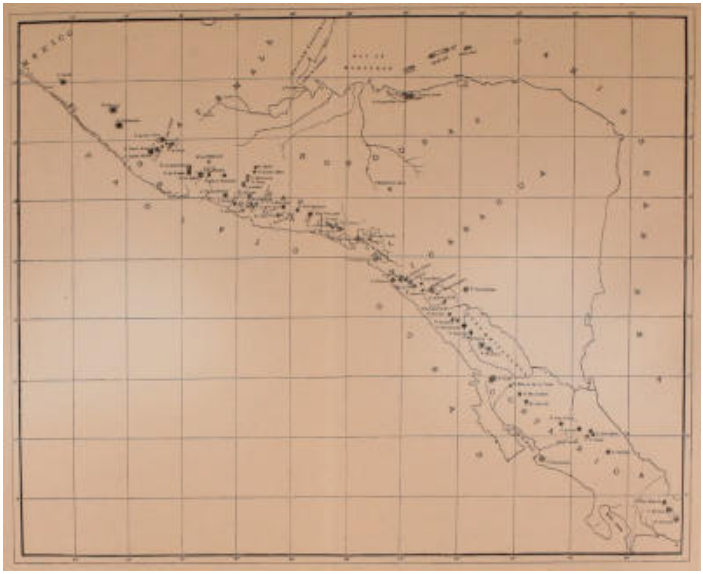
Among the mollusks the conch holds an important place both as an article of food and as an instrument of noise. Three kinds are distinguished,—the *queen*, *king*, and *horse*; the two last being the best for eating, while the first is much sought for cameo-cutting. A fine pink pearl is found in some of the shells. I consider a conch-soup quite equal to oyster-soup; but it is said (with some reason) to be a strong

aphrodisiac. Madrepores, corals, sea-fans, and the varied inhabitants of reefs, are found in considerable variety, and are now the subject of collection and study by at least two competent observers. Jellyfish (*Medusæ*), Portuguese men-of-war (*Physalia*), and star-fish (*Asterias*) are abundant, and a naturalist would have a good harvest on the cayos and reefs of the Bay of Honduras.



Passiflora Brighami, Watson.

Transcriber's Note: image is clickable for larger version



CENTRAL AMERICAN VOLCANOES.

CHAPTER XII.
EARTHQUAKES AND VOLCANOES.

Much has been written of the effect upon the character and feelings of a people caused by constant dwelling among the more marked phenomena of Nature. It is a mistake to suppose that the eye sees all that is impressed on the retina, that the ear catches more than an insignificant share of the innumerable sounds falling ceaselessly on the tympanum, or that the mind interprets many of the marvels that each instant presents to it. Only the educated eye, the practised ear, the cultivated mind, can appreciate what the Creator has placed before it in this beautiful world whose wonders no human understanding, however taught, is capable of wholly comprehending. The worldly wisdom of the saying that “familiarity breeds contempt” is applicable to the greater portion of humanity; and dwellers among the Alps cease to see, if indeed they ever saw, what strikes the dweller on the plain with awe as he gazes for the first time at the Jungfrau. To a thinking, studying man, familiarity is the mother of awe.

In a region where the molecular forces, those mighty slaves of a Divine Will, are working out of doors, so to speak; where from the summit of a volcanic peak one can count scores of others ranged on his right hand and on his left; where he can see, if he has opened the door for such vision, the cooling globe wrinkling with age, the force of contraction liquefying in fervent heat the solid materials of the earth’s crust and pouring out into daylight the

molten rock, or puffing out the dust of stones ground to powder in the gigantic mill,—his heart, his brain, his very being, will be enlarged by the reflections that come to him in such moments. Not so the Indio who lazily cultivates his milpa on the lower slopes of this same volcano. His feet never seek the summit, where no maiz can grow. He knows that the ground is very fertile where his hut is placed; he has nothing that an earthquake can destroy, and the showers of ashes, while injuring his present crop, are a pledge of increased fertility in the future; then from the streams of lava he can run, should they come in his way. When a more terrible outbreak of the great mass above him disturbs his stolidity, he attributes it to some supernatural agency, and calls upon his especial saints for the protection due their votary. Have not the Central Americans baptized their volcanoes, and have not these huge Christians since that rite been quiescent and proper members of the Church?

The people who live in the midst of this region of volcanic disturbances have not been elevated by communion with this manifestation of the agencies of Nature. Their religion is not autochthonic; their choicest traditions come from the non-volcanic lands to the eastward, and are not tinged with the lurid glow of the earth-fires. Even their hell is no fiery furnace, and the apostles of an Eastern religion introduced to their imagination that supposed element of future punishment. Where a suggestion of fire-worship appears, it is always called forth by the sun,—that source of life and warmth and growth.

And yet, here is a country where volcanoes cluster,—their number reaching several hundred,—where hot-springs are more common than the cold-springs

in most countries, and where earthquakes are very frequent and destructive. The volcanoes of the Hawaiian Archipelago are larger, those of Java more destructive, and the equatorial group of South America is loftier; but here between Popocatepetl and Istaccuahuatl, the giants of the plain of Anahuac, and the Costa Rican Turrialba extends an unbroken line of mighty cones and gaping craters. Somewhere on that line, smoke is ever rising; and at night the mariner along the Pacific coast sees the beacon-fires lighted by no mortal hand.

We must not expect to find in native records any careful account, or even notice, of eruptions or earthquakes; if referred to at all, it will be much as in the quotation I have already given from the "Popul Vuh," where Cabracan is said to be in the habit of shaking the mountains. In the three centuries and a half since Spain sent her educated sons to this land, with the exception of some three hundred earthquakes and half a hundred eruptions, we have no better record. While it is true that geology has existed as a science only within the present century, yet one would suppose that a catastrophe causing the death of hundreds of people and the destruction of much property would be entered with some minuteness in the annals of the time; but were it not for the masses and church processions to calm the trembling earth or appease the angry mountains, the worthy padres would perhaps have failed to notice these disturbances of Nature in their parochial records. Even the stories we have of the early experiences of the Spaniards in matters of vulcanology are so mingled with devils and unholy work that they are nearly incredible; and the stone volumes lying about the mountains, written by the hand of Nature, rather than the human chronicles,

must be our guide.

VOLCANOES.

Stephens has described some of the Central American volcanoes from personal visits, but not with the pen of a geologist, and in the last years of the French Empire able geologists[61] redescribed some of the same peaks; but there are still more than a score of lofty cones that no geologist has ever ascended, and there are many rising from an almost unbroken forest, whose volcanic nature has not yet been fully determined. Even in the present age of physical research Central America has been sadly neglected; and we may express a hope that some young man is even now training his thews and sinews, and hardening his constitution by virtuous abstinence and careful exercise, as well as training his mind to interpret and his eye to see the rich harvest that here awaits the proper explorer. No feeble student need attempt the task. Death surely waits for him in the jungle, on the precipices, in the treacherous craters, even in the posada to which he brings his exhausted frame, should he be so foolhardy as to ascend a volcano in this tropical climate.

This is not the place to enter into a scientific description of even the little that is known of the volcanic phenomena of Central America; but perhaps my readers will pardon me if I make some few quotations from what Mr. Darwin once wrote me he considered the poetry of geology. I may at the same time show faintly what a tempting field there is for the truly scientific explorer.[62] What I have said already will be my excuse for inaccuracies, and I can

only claim to have consulted the best authorities when my personal observation fails, and they must bear the blame of any misstatements. I give first a list of the principal volcanoes, then of their best-known eruptions, and finally an enumeration of the earthquakes. Hot and mineral springs are very frequent all over the country; but as their chemical constituents and medicinal properties have not been determined, and their physical peculiarities are not noteworthy, we may pass them by in this brief survey with the remark that the Indios do not seem to have made much use of their medicinal virtues, and turn at once to a catalogue of the volcanoes. From what I have myself seen of the extinct craters in the republic of Guatemala, I am convinced that I have collected in this list barely a tithe of the distinct volcanic vents. The Soconuscan volcano Istak has never been described, and some have doubted its existence; of the others whose names are in the list very few have been examined by geologists. Beginning at the extreme northwestern end of the chain in Central America, we find it extends south fifty-five degrees east; and while the volcanoes are generally in line, there are several subsidiary lines at right angles to the general trend.

Name.	Present State.	Last Eruption.	Height.
	IN GUATEMALA.		
Tacanà	Quiescent	1855	
Tajumulco[63]	Extinct		18,31
Santa Maria (Exancul)	”		11,
Cerro Quemado	Quiescent	1785	10,
Zuñil	Extinct		

Santa Clara	”		8,
San Pedro	”		8,
Atitlan	Active	1852	9,
Acatenango	Quiescent		13,
Fuego	Active	1880	12,
Agua	Extinct		12,
Pacaya (Pecul)	Quiescent	1775	8,
Cerro Redondo	Extinct		3,
Tecuamburro	”		
Moyuta	”		
Chingo	”		6,
Amayo	”		
Mita	”		5,
Suchitan, or Santa Catarina	”	1469(?)	
Monte Rico	”		
Ipala	”		5,
	IN SAN SALVADOR.		
Apaneca	Extinct		5,
Santa Ana	Active		6,
Izalco	”	constant	6,
San Salvador[64]	”		6,
Cojutepeque, or Ilopango	”		3,
San Vincente	Quiescent	1643	7,
Tecapa	Extinct		
Usulutan	”		
Chinameca	Quiescent		5,
San Miguel	Active	1844	6,
Conchagua	Quiescent		3,
	IN HONDURAS.		

Zacate Grande	Extinct		2,
Tigre	”		2,
Congrehoy Peak	Quiescent		8,
Bonito	”		
Bay Islands	Extinct		1,
	IN NICARAGUA.		
Coseguina	Quiescent	1835	3,
Chonco	”		
El Viejo (Belcher, 1838)	”		5,
Santa Clara	”		4,
Telica	Active	1850	3,
Orota	Quiescent		
Las Pilas	”		4,
Axusco, or Asososco	Extinct		4,
Momotombo	Active	1852	7,
Momotombito	Extinct		
Guanapepe	”		
Nindiri	Quiescent		
Masaya	Active	1858	3,
Mombacho	Extinct		5,
Zapeton, or Zapatera	”		
Ometepec	Active	1883	5,
Madeira	Quiescent		5,
	IN COSTA RICA.		
Orosi	Quiescent		8,
Rincon de la Vieja	”		
Miravalles	Extinct		5,
Tenorio	”		
Los Votos, or Poas	”		10,

Barba	”		
Irazu, or Cartago	Active	1726	11,
Turrialba	Extinct		12,
Chiripo	”		

Besides the volcanoes contained in the preceding list there are in Columbia three volcanic peaks:—

Name.	Present State.	Height.
Pico Blanco	Extinct	11,740
Rovalo	(?)	7,021
Chiriqui	(?)	11,265

The volcanoes on the Atlantic coast have been little noticed. Congrehoy Peak has the sharpest cone I have ever seen, almost equalling the impossible cones in Humboldt’s drawings of the Cordilleras; and I regret that the only photograph I was able to make of the mountain-top rising above the low-lying clouds was defective. Trusting too securely to my camera, I did not measure the angle, although the sketch I made just before is quite as the mountain looks. The sharpness is perhaps the result of an eruption said to have taken place a few years ago, when the crater fell in and ashes were carried as far as Belize,—a hundred and fifty miles. Belonging to the same system as Congrehoy and Bonito are the Bay Islands. Of these, Utila shows streams of vesicular basaltic lava, and fragments of a more compact, older basalt; but I have found neither on this island nor on Roatan any signs of a crater. The formation is, however, distinctly volcanic, and apparently of a period anterior to the eruptions which built the Island of Oahu in the Hawaiian

Group,—I judge by the amount of decomposition and degradation, the lavas in both cases being similar in composition and physical character.



Congrehoy Peak.

I have mentioned the deposits of volcanic sand found on the north shore of the Lago de Izabal, in a region surrounded by what are thought to be calcareous mountains; and I may add that several peaks in the Cockscomb Range of British Honduras appear from a distance of perhaps forty miles to be volcanic cones.

Passing over the traditional outbreaks of the Central American volcanoes before the Conquest, the earliest recorded eruption was that of Masaya in 1522; and the Spanish chroniclers tell a very amusing story of the attempt of the Dominican friar Blase and his companions to draw up the molten gold (lava) in an iron bucket from El Infierno de Masaya, or Hell of Masaya. The bucket, as well as the chain which held it, melted on approaching the lava; and the pious Churchmen, instead of being enriched by the precious metal, were poorer by the cost of the expedition. According to the same authority, the Indios at certain seasons cast living maids into the crater to appease the fire, that it might not break forth and injure their crops. This would indicate a continued state of activity, without an outbreak from the crater, much as in the Halemaumau of the volcano Kilauea. It is curious that in Yucatan the

Mayas sacrificed maidens to water by casting them into the sacred well or Cenote of Chichen Itza;[65] and a similar sacrifice has been made at Ilopango in modern times. In 1772 the next real eruption took place, and in 1858 another slight one. The cone is directly over the Lake of Masaya,—the only source of water in that dry land; and its ejections are encroaching upon the area of the lake. But I will put the eruptions in a tabular form for convenience:—

LIST OF THE RECORDED ERUPTIONS IN CENTRAL AMERICA.

Year.	Volcano.
1522	Masaya
1526	Fuego
1565	Pacaya
1581	Fuego
1582	”
1585 and 1586	”
1614	”
1623	”
1643	San Vincente
1651	Pacaya
1664	”
1668	”
1670	(?) in Nicaragua
1671	Pacaya
1677	”
1686	Fuego
1699	”
1705	”

1706	”
1707	”
1710	” two eruptions
1717	”
1723	Irazu
1726	”
1732	Fuego
1737	”
1764	Momotombo
1770	Izalco (formation of)
1772	Masaya
1775	(?) in Nicaragua
1775	Pacaya
1785	Cerro Quemado
1798	Izalco
1799	Fuego
1803	Izalco
1821	(?) in Nicaragua
1829	Fuego
1835	Coseguina
1844	San Miguel
1847	(?) in Nicaragua
1850	Telica
1852	Momotombo
1855	Tacanà
1855	Fuego
1856	”
1857	”
1858	Masaya
1869	Izalco
1870	”

1880	Ilopango (Lago de)
1880	Fuego
1883	Omotepec

EARTHQUAKES.

I do not propose to weary my readers with a list of the three hundred earthquakes that have been thought severe enough to be recorded; but a picture of Central America would be unrecognizable without some color of the natural disturbances that are inseparably connected in the popular mind with this part of the continent.

In 1541 the capital of the kingdom of Guatemala, now Ciudad Vieja, was a young and flourishing city. Founded in July, 1524, between the mountains Agua and Fuego, in the place called Almolonga ("water-fountain"), with the proud title of "City of Saint James of the Knights of Guatemala," it had grown to a respectable size, in spite of numerous misfortunes, to which Juarros devotes an entire chapter of his "Compendio." An earthquake in 1526, so severe, says Bernal Diaz del Castillo, that men could not stand, seems to have frightened the population less than did an enormous lion (puma?) which descended the forest-clad slopes of Agua in 1532 and made great havoc, until a reward of twenty-five gold dollars and a hundred fanegas of wheat induced a peasant to kill the monster. Politics had, as is usually the case, made more disturbance than the forces of Nature. The Conquistador Alvarado was recently dead, his widow, Doña Beatriz de la Cueva, had claimed the government, and the obsequies of the dead and the ceremonials of the new ruler were agitating the city when the sudden and terrible destruction of both

ruler and her capital came. Accounts of the catastrophe vary, as is usual with all history,—which some one has wisely called “probabilities and possibilities extracted from lies;” but from nine extant descriptions and an examination of the physical marks which three centuries have not wholly effaced, I believe the following to be a fair story of the event:—

September is always a rainy month in Guatemala, and on Thursday, the 8th, a storm began which was violent even for that place and season. Rain fell in torrents, and continued to fall all that day and Friday and Saturday. Two hours after dark on the last day a severe earthquake shock was felt, and from Hunapu, since called the Volcan de Agua, came an avalanche of water, carrying with it immense rocks and entire forests. The terror of the earthquake and the roar of the unseen torrent wrought the excitement of the inhabitants to the utmost. Soon the deluge reached the city; the streets were filled to overflowing, and the houses were beaten by the waves and battered by the great trees brought by the torrent. Among the houses most exposed was that of Doña Beatriz, the widow of the Adelantado. She was preparing for bed; but startled by the earthquake and the terrible noise, endeavored to obtain safety in a small chapel near by, and while clinging to the crucifix was killed by the fall of the chapel wall. Her house was uninjured. All through the city the loss of life was very great; six hundred Spaniards perished, and the loss of Indios and Negroes was far greater. In the morning the remains of the city hardly appeared above the trees, rocks, and mud of the avalanche. It was then that the disheartened survivors decided to remove a league eastward, to the present Antigua.

The earthquake did not destroy the city, still less was there an eruption of water from the volcano; but the crater of the long-extinct cone had been filled with the rains, and the tremor shattered the loose dam of the crater-lip and let the great body of water down the steep side of the mountain. There was water in the crater long before, and the crater to-day shows marks of the broken wall and emptied lake. The destruction of the city was considered a judgment of Heaven upon Doña Beatriz for certain impious remarks made in her bereavement, and it was with difficulty that her family were able to bury her remains in consecrated ground.

On May 23, 1575, San Salvador (Cuscatlan) was destroyed by an earthquake which also greatly damaged Antigua. Afterwards the latter city had an experience that would have discouraged the people of any Northern town, for in 1576 and 1577 it was badly shaken, and on Dec. 23, 1586, destroyed. Then it was rebuilt enough to be again shattered on Feb. 18, 1651, and again on Feb. 12, 1689, and Sept. 29, 1717. The day after this last shock Antigua was destroyed completely; but for all that, on March 4, 1751, the chronicler writes “many ruins,” and then the centre of disturbance goes southward for a while. In April, 1765, several towns were destroyed in San Salvador, and the next month many in the Department of Chiquimula in Guatemala; while during the following October the “earthquake of San Rafael” shook many Guatemaltecan towns to pieces.

On July 29, 1773, Antigua was again destroyed,—if such a thing was possible; and although her inhabitants yielded to the momentary discouragement and permitted the Government to be removed to the Valley of the Hermitage, they have

never allowed the ruins to become desolate, and to-day the traveller gazes in astonishment at the shattered walls of nearly eighty churches still the ornament of the town. The Antigua that once sheltered eighty thousand inhabitants, beautiful in its situation and distinguished by its architectural display, is still attractive in its ruins; its forty thousand inhabitants go in and out under the shadow of the volcano and await the next destruction, which may come to-morrow or years hence: the lesson that is past is all forgotten. I confess myself that the ruined churches, so fresh after the sun and rains of a century have penetrated their shattered walls, inspired no apprehension of danger; they were objects of great interest rather than warning; and it was no strange thing that those born in that charming place should cling to it still.

In 1774 nearly all the towns on the Balsam Coast of San Salvador were ruined. I hope my readers understand the delicate gradation in the terms used in speaking of the misfortunes of earthquake countries. A place is “shaken,” then “shattered,” then “ruined,” and finally “destroyed” by the *visit* of a *temblor*; and it is a very nice matter to decide exactly where one term is appropriate and another not.

In February, 1798, San Salvador was badly shaken and after a rather long rest, broken by “no great shakes,” two very destructive earthquakes were felt in March and October, 1839. On Sept. 2, 1841, Cartago, in Costa Rica, was destroyed; in June, 1847, the Balsam Coast was greatly ruined; on May 16, 1852, the disturbances occurred northward, in the vicinity of Quezaltenango; on April 16, 1854, San Salvador was destroyed,—not, however, for the last time. On Nov. 6, 1857, Cojutepeque was badly

shaken, and the same misfortune came upon La Union Aug. 25, 1859. The following December houses were shattered in Escuintla and Amatitlan; Dec. 19, 1862, Antigua, Amatitlan, Escuintla, Tecpan Guatemala, and the neighboring towns were severely shaken; June 12, 1870, Chiquimulilla was destroyed, and much damage done in Cuajinicuilapa; a month later a severe earthquake was felt in the Departments of Santa Rosa and Jutiapa; March 4, 1873, San Salvador and the neighboring towns were destroyed, —a process they must have become quite accustomed to by this time,—and eighteen months later it was the turn of Patzicia to be destroyed, while Chimaltenango, Antigua and the vicinity were only ruined. The year 1878 was marked by the destruction of several towns in Usulutan, San Salvador, and on Dec. 27 and 30, 1879, most of the small towns in the neighborhood of the Lago de Ilopango were overturned.

Hardly a month passes without some slight tremor in western Guatemala. In recent years so much more attention has been paid to seismology, or the observation and record of the time, duration, and direction of earthquake shocks, that the longer lists seem to indicate the increase of slight tremors; but this is not probable, and certainly the volcanic eruptions have diminished in force and frequency. Fuego, the most important, lays claim to twenty-one of the fifty recorded eruptions of the Central American volcanoes; but during the present century it has cast out merely sand, and no lava streams.



VOLCAN DE FUEGO.

I have never had the experience of a very severe earthquake, although I have had the pictures swing on the walls and the plastering crack and fall; therefore I must borrow the description of an earthquake, that the list just given may seem more real. The following account is considered very truthful:—

“The night of the 16th of April, 1854, will ever be one of sad and bitter memory for the people of Salvador. On that unfortunate night our happy and beautiful capital was made a heap of ruins. Movements of the earth were felt on Holy Thursday, preceded by sounds like the rolling of heavy artillery over pavements and like distant thunder. The people were a little alarmed in consequence of this phenomenon, but it did not prevent them from meeting in the churches to celebrate the solemnities of the day. On Saturday all was quiet, and confidence was restored. The people of the neighborhood assembled as usual to celebrate the Passover. The night of Saturday was tranquil, as was also the whole

of Sunday. The heat, it is true, was considerable, but the atmosphere was calm and serene. For the first three hours of the evening nothing unusual occurred; but at half-past nine a severe shock of an earthquake, occurring without the preliminary noises, alarmed the whole city. Many families left their houses and made encampments in the public squares, while others prepared to pass the night in their respective courtyards.

"Finally, at ten minutes to eleven, without premonition of any kind, the earth began to heave and tremble with such fearful force that in ten seconds the entire city was prostrated. The crashing of houses and churches stunned the ears of the terrified inhabitants, while a cloud of dust from the falling ruins enveloped them in a pall of impenetrable darkness. Not a drop of water could be got to relieve the half-choking and suffocating, for the wells and fountains were filled up or made dry. The clock-tower of the cathedral carried a great part of that edifice with it in its fall. The towers of the church of San Francisco crushed the episcopal oratory and part of the palace. The church of Santo Domingo was buried beneath its towers, and the college of the Assumption was entirely ruined. The new and beautiful edifice of the university was demolished, the church of the Merced separated in the centre, and its walls fell outward to the ground. Of the private houses a few were left standing, but all were rendered uninhabitable. It is worthy of remark that the walls left standing are old ones; all those of modern construction have fallen. The public edifices of the Government and city shared the common destruction.

"The devastation was effected, as we have said, in

the first ten seconds; for although the succeeding shocks were tremendous, and accompanied by fearful rumblings beneath our feet, they had comparatively trifling results for the reason that the first had left but little for their ravages. Solemn and terrible was the picture presented on the dark funereal night of a whole people clustering in the plazas and on their knees crying with loud voices to Heaven for mercy, or in agonizing accents calling for their children and friends whom they believed to be buried beneath the ruins. A heaven opaque and ominous; a movement of the earth rapid and unequal, causing a terror indescribable; an intense sulphurous odor filling the atmosphere, and indicating an approaching eruption of the volcano; streets filled with ruins, or overhung by threatening walls; a suffocating cloud of dust almost rendering respiration impossible,—such was the spectacle presented by the unhappy city on that memorable and awful night.

"A hundred boys were shut up in the college, many invalids crowded the hospitals, and the barracks were full of soldiers. The sense of the catastrophe which must have befallen them gave poignancy to the first moment of reflection after the earthquake was over. It was believed that at least a fourth part of the inhabitants had been buried beneath the ruins. The members of the Government, however, hastened to ascertain, so far as practicable, the extent of the catastrophe, and to quiet the public mind. It was found that the loss of life was much less than was supposed; and it now appears probable that the number of killed will not exceed one hundred, and of wounded, fifty. Fortunately the earthquake has not been followed by rains, which gives an opportunity to disinter the public archives, as also many of the valuables contained in the dwellings of

the citizens. The movements of the earth still continue, with strong shocks; and the people, fearing a general swallowing up of the site of the city, or that it may be buried under some sudden eruption of the volcano, are hastening away." In 1859 the city was again in order, as the seat of government, after an ineffectual attempt to remove it to the plain of Santa Tecla, ten miles distant.

The birth of the volcano of Izalco occurred in 1770. It is, indeed, only a lateral opening of the volcano of Santa Ana, which, like Ætna, is a mother of mountains. San Marcellino, Naranjo, Tamasique, Aguila, San Juan, Launita, and Apaneca all seem to be her offspring. Near the base of the main volcano was, previous to 1770, a large cattle rancho. At the close of 1769 the people on this estate were alarmed by subterranean noises and earthquake shocks, which continued to increase in loudness and severity until February 23, when the earth opened about half a mile from the houses on the hacienda, emitting fire, smoke, and lava. The house-people fled from so terrible a neighbor; but the *vaqueros*, or cowboys, who came daily to see the new monster, declared it grew worse and worse, throwing out more smoke and flame daily, and that while the flow of lava sometimes stopped for a while, vast quantities of sand and stones were thrown out instead. For more than a century this action has gone on, and the ejecta have formed a cone more than six thousand feet high, or higher than Vesuvius. At intervals of from ten to twenty minutes, loud explosions occur, with dense smoke and a puff of cinders and stones. By night the view from Sonsonate is very attractive, as the cloud of smoke is illuminated by the molten mass within, and the red-hot stones shoot through this

darker mass and seem to ignite vapors, which flash like lightning. As these stones roll down the steep sides of the cone, they leave a faint track some distance (optical, probably), and sometimes the caldron boils over, sending rills of molten lava down the cone. Well may the sailors call this “El faro de Salvador,”—the lighthouse of Salvador. Like Stromboli, it is always active; and while most volcanoes are noted for the irregularity of their eruptions, Izalco is exceedingly regular, though sometimes acting with unusual violence (1798, 1869, 1870). The volcano of Tanna, in the western Pacific, exhibits this same pulsating character.

San Miguel is the largest active volcano in San Salvador, rising from the plain to a height of perhaps sixty-five hundred feet. Like most of the Central American volcanoes, its mass is a very regular cone, and its form, size, and beautiful colors render it one of the grandest objects of its class. From the deep green of the forest which surrounds its base, the color fades to the light green of the upland grass, then to the deep red of the scoriæ, and the top is grayish-white. Above all, the ever-changing cloud of smoke floats lazily away. Of all the accounts of ascents of Central American volcanoes, I have selected the account published many years ago by Don Carlos Gutierrez of his ascent of San Miguel, because it seems to convey a fair idea of the simplest form of mountain-climbing and of the appearance of an active cone. He says:—

“We started from the city of San Miguel on the afternoon of the 7th of December, 1848, directing our course towards the western border of the plain where rises the dark bulk of the volcano. At eleven o’clock at night we reached the foot of the mountain,

distant four leagues from the town. Although the moon shone with extraordinary brilliancy and the night was one of serenest beauty, yet we considered it safer to take shelter in an Indian hut for the remainder of the night than trust ourselves among the fissures of the mountain in the treacherous moonlight. At four in the morning, with the earliest dawn of day, we commenced our ascent on horseback. We however soon found our course so much impeded by masses of lava, over which it was difficult to force the animals, that we were compelled to dismount and pursue our journey on foot. About half way up the mountain the dikes of lava became less frequent, and the ground more firm and open, and, although quite precipitous, yet not difficult of ascent. This open belt, however, does not extend to the summit, and long before we reached it we were again driven upon the beds of sharp, rough, and unsteady lava.

"Our course now lay through a deep channel formed between two vast currents of lava, composed of enormous crags, which in 1844 had flowed out from fissures in the side of the volcano. We had not proceeded far between these walls of rock when we found the scoriæ beneath our feet so yielding and unsteady that we could scarcely retain our foothold. Frequently we slid back three or four yards, thus losing in a moment the advance which it had cost us great labor to accomplish. Nevertheless, after many efforts and through much exertion, and after having suffered several severe falls, we succeeded in reaching the throat of the mountain. Here the lava was solid and the scoriæ firm; and though the slope was very steep and dangerous, yet we found it easier to proceed here than over the soft and yielding ashes below.

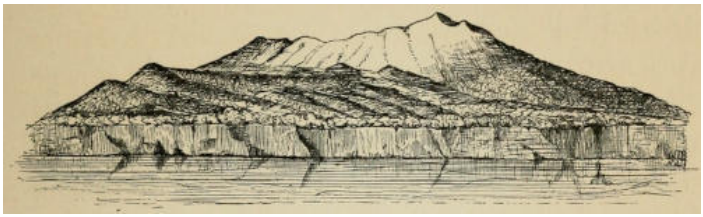
"About mid-day we reached the summit proper of the mountain and stood on the edge of the great crater, which is surrounded by a wall of immense rocks, irregular in height, and having a circuit of a mile and a half. The area within these strange bulwarks is level; but on descending, we found with alarm that it was traversed in every direction by profound fissures, varying from one foot to five yards in width, from which escaped dense clouds of sulphurous smoke. About in the centre of this area was the yawning, active crater, or mouth of the crater, or mouth of the volcano. Our guide peremptorily refused to advance farther, insisting that we were liable at any moment to sink into some one of the numerous fissures which yawned beneath the superficial crust. He added further that in the neighborhood of the crater the gases were so pungent and the sulphurous odor so overwhelming that we could not escape suffocation.

"The alarm with which our guide endeavored to inspire us did not, however, get the better of our curiosity, and we determined to reach the crater. Providing ourselves with long staves with which to test the nature of the ground, we advanced carefully and slowly. At every step the clouds of smoke became more dense, and the odor of the gases escaping from the multitudinous fissures more overpowering. Our efforts, however, were amply repaid by the sight which met our eyes when we finally reached the brink of the crater. Nothing could be grander or more magnificent.

"A few months before, I had seen the volcano of Izalco, with its crown of living fire and its flashing tongues of flame, throwing out floods of incandescent lava; but sublime as was the spectacle,

it paled and grew tame in comparison with that before us. The crater, as before observed, is in the centre of the level area which I have described. It is of irregular width, in some places only ten or twelve yards broad; in others, fifty or sixty, dividing the greater crater from side to side. The depth of this orifice, or cleft, is so great that the eye cannot fathom it. One sees only a vast gulf of molten lava, over which plays a pale and sulphurous flame, reflected again and again from burned and blistered rocks, fantastic in shape and capricious in position, which form the walls of the orifice. Thick whorls of smoke drifted up from all sides, so that at times I was unable to distinguish my companion, distant only a few yards. An indescribable magnetic influence or fascination seemed to rivet our eyes on the molten floods surging below us, and which, from their roar and vibrations, seemed to threaten momentarily to rise and overwhelm us, as if the volcano were on the verge of eruption.

“Our contemplations of this fearful orifice were therefore brief, the smoke and odor overpowered us; and in a few moments we were forced to abandon our positions and seek a breath of pure air at a distance. We returned rapidly to the place where we had left our guide; and casting a farewell glance over the strange area before us, commenced our descent, reaching San Miguel at six o’clock in the evening, weary and exhausted.”

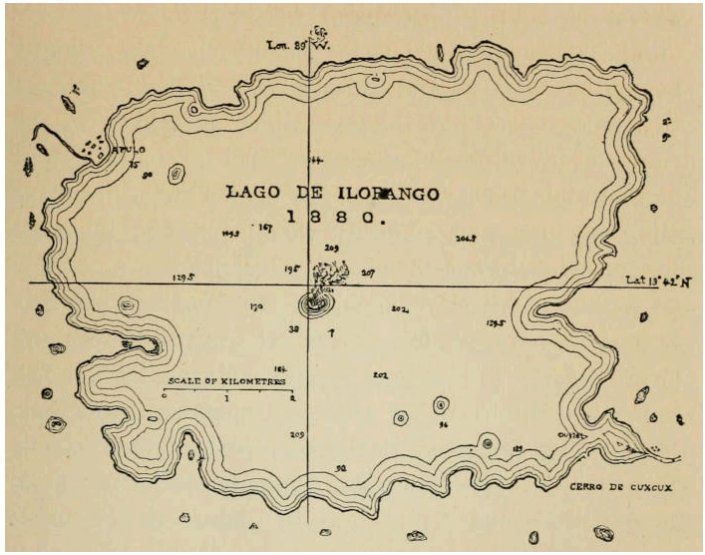


Volcan de Coseguina, from the Sea.

Of the eruptions of the Central American volcanoes none in the historical period have surpassed that of Coseguina in 1835. This mountain forms the eastern gate-ward of the Gulf of Fonseca, Conchagua rising on the other side of the rather narrow entrance. Not remarkably high (3,600 feet), it rises directly from the sea, and by its irregular outline, scarred slopes, and desolate appearance conveys the impression of a greater than its real mass. On the 20th of January, 1835, the disturbance began with very loud explosions, heard for a hundred leagues. Above the mountain rose an inky cloud which spread outwards precisely as Pliny describes the terrible cloud that rose above Vesuvius in 79, spreading like an Italian pine. From this column of heated vapor and sand darted lightning-flashes, produced either by the friction of the immense quantity of rough mineral particles, or by the sudden projection of hot gases and minerals into the much cooler atmosphere. As the cloud spread, the light of the sun was obscured, everything looked sickly in the yellow light, and the falling sand irritated both eyes and lungs. For two days the explosions grew more frequent and louder, while the eruption of sand increased; and on the third day the terrible noises were loudest in an almost absolute darkness. The rain of sand continued until a deposit of several feet had formed for many leagues around the crater. At Leon, in Nicaragua, more than a hundred miles away, the sand was several inches deep, and it fell in Vera Cruz, Jamaica, Santa Fé de Bogota, and over an area nearly two thousand miles in diameter. At Belize the noise of the explosions was so loud that the commandant mustered his troops and manned the forts, thinking there was a naval action off the anchorage. For eight

hundred miles these noises were heard, and the vibrations near the volcano must have been indeed terrible. We can credit the accounts of the terror of the wild things of Nature as well as of human beings. For thirty leagues around, the astounded people believed that the Last Judgment had come, and in the darkness, thick with the falling ashes, groped hither and thither, bearing crosses and uttering prayers inaudible to themselves in the crash of elements. At the end of forty-three hours the earthquakes and explosions ceased, and with a strong wind the ashes were gradually blown away from the atmosphere. The returning light of day showed a gloomy outlook. Ashes covered the country on every side. On Coseguina a crater had opened a mile in diameter, and vast streams of lava had flowed into the gulf on one side, and into the ocean on the other. While the verdure was gone from the land, pumice covered the sea for a hundred and fifty miles.

Terrible as was this outbreak, the explosive violence was not so great as of the eruption from some unknown vent whose deposits are about Quiché in Guatemala, in the valley of the Chixoy, and elsewhere; and Pacaya has in some prehistoric time thrown out sand and pumice in greater quantity than did Coseguina, as we see by the deposits about the Lago de Amatitlan.



Lago de Ilopango, 1880.

With the mention of the Lago de Amatitlan it occurs to me that the so-called volcanic lakes of Central America deserve a short notice. I would not claim that there are not here genuine pit-craters filled with water and called *lagos* or *lagunas*. On the summit of many of the extinct volcanoes are craters filled with water, as Ipala and others, and as Agua was before the destruction of the crater-lip in 1541; while in San Salvador and Nicaragua are many lakes, usually of small extent, but sometimes so large as to mislead the casual observer as to their origin, though of undoubtedly volcanic nature. Of this last class is the Lago de Masaya, from whose deep pool the people of the neighboring village obtain all their water. Coatepeque is another volcanic lake, whose walls are so steep that they can be descended only at certain points by means of ladders and steps cut in the lava rock. Finally there are many pits, sometimes no more than a hundred feet in diameter, but of very

great depth, and filled sometimes with fresh water, but more commonly with saline waters so strongly impregnated as to be undrinkable. The great lakes of Amatitlan and Atitlan are not certainly volcanic, although their shores are dotted with hot-springs and guarded by volcanoes,—they are not, that is, actual craters; but the former seems to be the result of a subsidence caused perhaps by the removal of material from lower layers by eruptions of Pacaya, and it is of no considerable depth, while good authority has considered the Lago de Atitlan the result of damming up a valley and streams by the masses of the volcanic group of the same name. A glance at the map of this lake (p. 154) as given by the French geologists whose opinion is quoted, will show that the volcanoes occupy a position not far from the geometrical centre of the Lago, or where they should be if the lake was an ancient crater. Compare with this, if you will, the plan of an undoubted volcanic lake, that of Ilopango in San Salvador. This body of water is not only the seat of volcanic eruptions, as is also the Great Lake of Nicaragua, but probably fills a depression that has been the result of the coalescence of several points of eruption. I have before me the interesting report to the Guatemaltecan Government by my friend Edwin Rockstroh of his observations made on the eruption of one of these craters in 1880. The lake is 9,200 metres wide from east to west, and 7,300 metres from north to south, with an area of 54.3 kilometres. Completely surrounded by precipitous mountains, interrupted only on the southeast by the narrow gorge through which the waters of the lake are discharged, it receives no important affluents from the surface; and as its emissary is of much greater volume at all seasons than these insignificant brooks,

it is probably fed by subterranean springs,—indeed one of these, near the south shore, enters with such force as to cause a ripple on the surface of the lake. Soundings indicate a cup-like bottom with an extreme depth of less than seven hundred feet (209.26 metres). The level of the lake has often changed, and in 1880 the surface-level fell more than thirty-four feet, leaving exposed stumps of trees encrusted with calcareous deposits. It was before the last eruption well stocked with fish of the varieties called by the people who lived near by *mojarra*, *burrito* (both species of the genus *Heros*), *pepesca*, and *chimbolo*. At times an eruption of sulphurous gases partly asphyxiated the fish, driving them to the shores, where they fell a prey to the fishermen. What the fishermen did on occasion of greater disturbances is told in the following extract from a Guatemaltecan journal;[66] the author, Don Camillo Galvan, formerly Visitador-General, writes as follows:—

"The people of the pueblos around the lake, Cojutepeque, Texacuangos, and Tepezontes, say that when the earthquakes came from the lake, which they knew by the disappearance of fish, it was a sign that the monster lord of those regions who dwelt in the depths of the lake was eating the fish, and probably would consume them all shortly, unless provided with a more delicate and juicy diet worthy of his power and voracity; for they say that the monster only eats fish as men eat fruit, to refresh and allay hunger. The natives, deeply afflicted by the fish famine, the failure of an article of commerce and their ordinary diet, collected at the command of their chiefs. Then the sorcerers (*los brujos*) commanded the people to throw flowers and fruits into the lake: if the tremblings continued, they were to cast in animals, preferring conies (*Lepus Douglassii*), taltusas

(*Geomys heterodus*), then armadillos (*Dasypus*), and mapachines (*Procyon cancrivorus*). These animals must be caught alive and cast living into the water, under penalty of no less than hanging with the vine *zinak*. If some days passed, and the tremors continued, and the fish did not come out of their caves, they (the brujos) took a girl of from six to nine years old, decked her with flowers, and at midnight the wizards took her to the middle of the lake and cast her in, bound hand and foot and with a stone fast to her neck. The next day, if the child appeared upon the surface and the tremors continued, another victim was cast into the lake with the same ceremonies.

"Even in the years 1861 and 1862, when I visited these towns, they told me, though with much reserve, that the people of Cojutepeque and Chinameca kept this barbarous custom to prevent the failure of the fish."

Near the end of November, 1879, a series of earthquakes shook the lake (more than six hundred were counted), and on Jan. 11, 1880, the waters had risen about four feet. On the next day, between half-past four and half-past seven in the afternoon, 13,790,000 cubic metres of water escaped from the outlet of the lake, making a stream of greater volume than the Seine at Paris or the Rhine at Basle. The little river Jiboa, which received this torrent, did great damage to the plantations on its banks.

As is usual, the earthquakes were accompanied by the discharge of sulphuretted hydrogen, now in such quantities as to be very unpleasant at the city of San Salvador. On the 9th of January there appeared floating on the surface numerous flakes of a black foam composed of ferric sulphide, which in contact

with flame burned with a slight explosion. On the 20th, at eleven o'clock in the evening, a great disturbance was noticed in the midst of the lake, and the next morning a pile of rocks was seen, from whose midst arose a column of vapor. For more than a month this vapor column was visible, and the pile of rocks near the centre of the lake increased, while the water was heated and the sulphurous vapors extended over all the neighborhood. Beyond this no permanent volcano was formed above the level of the lake (1,600 feet above the sea).

It is dangerous to form conclusions as to the general course of volcanic action anywhere, for science is very much in the dark as to the causes of eruptions and earthquakes, as to the condition of the interior of our globe, whether fluid or solid, and also as to whether the lavas poured out during an eruption have been fluid since the earth was formed, or have been suddenly melted either as cause or effect of what we call an eruption. In the Central American volcanic region, as was stated at the beginning of this chapter, little has been done in the way of scientific exploration, and the facts recorded, beyond popular accounts of some especial disturbance, are so meagre that no large space would be required to present them to the reader. This is not, however, the place to enter into a scientific discussion, and I must content myself with a few bare statements.

In the first place, the volcanoes of the country discharge both ashes and lava, the latter being most frequently trachytic. Basaltic lavas occur, though less frequently than in Mexico and farther northward; and the columnar structure seen so well at Regla in Mexico is very rare in Guatemala. On the other hand,

pumice and obsidian, which are classed with the acid or trachytic lavas, are abundant, the latter furnishing material for knives, while the former has many applications in the arts of the present day. I have seen both basalt and basaltic rapilli in eastern Guatemala near the boundary of San Salvador, and basaltic sand is common on the southern coast.

Another feature of the Central American volcanoes is their remarkable regularity of form. This is due to the fact that the emissions consist of ash and lava of slight fluidity. In the Hawaiian Islands, where the basaltic lava is more fluid than in any other volcanic region, the lava-streams often flow for months, and extend fifty or sixty miles from the crater, building by successive eruptions a cone of great diameter in proportion to their height; Mauna Loa having a diameter of ninety miles at the sea-level, with a height of less than fourteen thousand feet and a slope of about seven degrees. The eruptions of the American volcanoes are mainly of masses of rock which are piled regularly about the base, in this way increasing the height, and great quantities of sand which fills the interstices, and finally of lava in a thick, viscid state which clings to the slopes of the growing cone and cements together the sand and larger fragments. No lava-stream, at least of modern times, has been found at any considerable distance from its source.

From the specimens I collected in some of the ravines which traverse the older deposits, I saw that in former ages the outflow was not only different from that of modern times, but of great variety of form in contemporaneous streams, although the chemical composition did not vary essentially.

Earthquakes are mainly due to the injection of

intensely heated lava into strata of cold rock in the process of forming dikes. When a volcano pours its lava out of its summit-crater, the eruption may be wholly free from earth tremors, as is often the case on the Hawaiian Islands; and this gives rise to the popular belief that active volcanoes are in some way a safety-valve for the subterranean forces. When, however, the shrinkage of the earth's crust or the explosive force of pent-up vapors cracks the solid rock, thus giving passage to the molten mass which must be supposed to underlie this volcanic region, the sudden contact of two bodies of very different temperatures (perhaps two thousand degrees) must cause vibrations entirely sufficient to account for the worst earthquake recorded. That the supply of molten rock is ample beneath the crust of this region, we have proof in the constant activity of Izalco, which for more than a century has poured out lava with the other ejections.

This theory of earthquake action is so simple that it must commend itself to any one who has observed the powerful vibrations excited by placing a cold kettle upon a hot stove, or by admitting with force a stream of hot water into a bath-tub partly filled with cold water. It may be stated also that lava is a remarkably poor conductor of heat (I have been able to walk over a crust that bent beneath my weight, and again where I left footprints in the half-hardened lava), and solid lava might retain a temperature of less than two hundred within a few feet of a molten mass ranging among the thousands of degrees. The secular refrigeration of the subterranean molten masses due to the slight conductivity of solid lava is well illustrated in the temperature of hot-springs, that remains unchanged for centuries.

Eruptions are usually of an explosive nature in the Central American region (as described in the outbreak of Coseguina), and the ejected ash is scattered often to a great distance to form by its decomposition layers of soil especially fitted for the cultivation of coffee, sugar, and the vine. Sulphur is not so abundantly deposited as at Ætna, Hekla, or even the Mexican volcanoes.

APPENDIX.

What an attic-room is to the thrifty housewife, an appendix is to the maker of a book. Some things that do not seem to be in place in the parlor or chamber are yet useful, and altogether too good to be thrown away, so they are put into the garret to await the expected use. In a book there are matters that the writer thinks ought to interest some reader, things that will be missed if they are not under the same roof,—I mean between the covers of the volume in hand,—and yet the skill is wanting to incorporate these odd pieces (of furniture, if you wish) in the orderly chapters of the book. And so I give you here several long notes and some longer lists.

A LIST OF COMMON CABINET WOODS, DYE-WOODS, AND TIMBER.

Almond (*Amygdalus communis*).

Fustic (*Maclura tinctoria*).

Funera.

Mahogany (*Swietenia mahogani*),—of various kinds, as red, circular, buttress.

Mangrove (*Rhizophora Mangle*); the wood is dark red, and very durable.

Mangrove (*R. Candel*); the wood is very heavy and takes a fine polish.

Granadillo,—a very solid dark-red wood, much used for tables.

Ronron.

Guachapeli,—a dark, very hard and strong wood, used in boat-building.

Madre cacao (*Erythrina*),—soft.

Alligator wood (*Guarea Swartzii*).

Trompillo.

Tepemís,—yellow.

Uña de gato (*Pithecolobium unguis-cati*).

Blood-wood (*Laplacea hæmatoxylon*).

Palo de Cortez.

Palo de mulatto (*Spondias lutea*),—a most beautiful and durable wood, very heavy.

Cola de pava.

Sangre de perro.

Cedar (*Cedrela odorata*).

Coco-wood (*Inga vera*).

Tatascame.

Saradillo.

Chaquiro.

Sechillo.

Sare.

Volador.

Brasiletto (*Cæsalpinia crista*).

Tatamite.

Goyava (*Psidium*); wood hard and compact,

though not of great size.

Arnotto (*Bixa orellana*) variety, with white wood.

Zorra.

Marillo.

Medlar.

Bambu (*Bambusa*).

Huiliguiste,—light-colored wood.

Conacaste.

Balsam-tree (*Clusia rosea*).

Calabash-tree, Guaje (*Crescentia cujete*).

Tempisque.

Pié de paloma.

Nance,—dye-wood.

Orange (*Citrus*),—white and close grained.

Chichipate.

Cuaquiniquil.

Varillo.

Sunzapote.

Copinol.

Sicamite.

Chaperno.

Cedar (*Bursera*).

Tamiagua.

Locust, Anime (*Hymenæa courbaril*); from this tree gum-copal is obtained.

Locust (*Byrsonima cinerea*).

Cambron.

Gum-thorn (*Acacia Arabica*).

Irayol,—yellow and ochre-colored.

Cotorron.

Quiebra-hacha (*Sloanea Jamaicensis*),—black wood.

Copalchi,—quinine-tree; the bark is used, and the wood is also in demand.

Mammee (*Lucuma mammosa*); the wood is very hard and heavy, but splits easily.

Chipilte.

Meloncillo,—dark.

Quita calzon.

Palo grande.

Pigeon-wood (*Coccoloba diversifolia*).

Rose-apple (*Jambosa vulgaris*).

Sebesten (*Cordia sebestena*).

Gorrion.

Canelillo.

Chicate.

Rosewood (*Dalbergia*).

Guilsinse.

Guaquilite.

Sandbox-tree (*Hura crepitans*).

Screw-pine (*Pandanus*); the heart-wood is very hard and ornamental.

Salm (*Jacaranda*); light-colored, much used for door-frames.

Ironwood (*Laplacea hæmatoxylon*).

Pine, ocote (*Pinus cubensis*).

Pine, long-leaved (*P. macrophyllum*).

Poknoboy (*Bactris balanoidea*).

Sandpaper-tree (*Curatella Americana*),—the rough leaves used for sandpaper.

Hog-gum (*Symphonia globulifera*).

Walnut (*Picrodendron juglans*).

Tamarind (*Tamarindus Indica*).

Melon.

Espina blanca (*Acacia Arabica*).

Copal (*Hedwigia balsamifera*).

Copalche, small (*Strychnos pseudoquina*).

Pimiento (*Pimenta vulgaris*).

Zebra-wood (*Eugenia fragrans*).

Mignonette-tree (*Lawsonia inermis*).

Totascamite,—yellow.

Guazuma (*G. tomentosa*).

Pepeto.

Dulcete.

Oak (*Ilex sideroxyloides*).

Tamacillo.

Zapotillo.

Caumillo.

Spanish plum (*Spondias purpurea*).

Santa Maria (*Calophyllum calaba*).

Filo.

Macaligua.

Loro.

Madrefera.

Sincho.

Pomegranate (*Punica granatum*).

Sapodilla (*Achras sapota*).

Ziricote,—beautifully marked; heavy.

Pine, mountain (*P. Ayacahuite*).

Pine (*P. filifolia*).

Maho (*Spondias?*).

Sapoton (*Pachira macrocarpa*).

Tamarind, wild (*Pithecolobium filicifolium*).

White-wood (*Oreodaphne leucoxylon*).

Willow, yellow (*Salix*).

Ebony, mosaic (*Brya ebenus*).

Balsam (*Myrospermum salvatoriensis*).

Pimientillo.

Qualm (*Cecropia peltata*).

LEAF-CUTTING ANTS.

The Œcodoma, Zompopos, or leaf-cutting ants, are such a pest to the fruit-growers of Central America that I have quoted from Mr. Belt the most satisfactory account of their habits that has ever been

published. He says:—

> “The first acquaintance a stranger generally makes with them is on encountering their paths on the outskirts of the forest crowded with the ants,—one lot carrying off the pieces of leaves, each piece about the size of a sixpence and held up vertically between the jaws of the ant, another lot hurrying along in an opposite direction empty handed, but eager to get loaded with their leafy burdens. If he follows this last division, it will lead him to some young trees or shrubs, up which the ants mount, and where each one, stationing itself on the edge of a leaf, commences to make a circular cut with its scissor-like jaws from the edge, its hinder feet being the centre on which it turns. When the piece is nearly cut off, it is still stationed upon it, and it looks as though it would fall to the ground with it; but on being finally detached, the ant is generally found to have hold of the leaf with one foot, and soon righting itself, and arranging its burden to its satisfaction, it sets off at once on its return. Following it again, it is seen to join a throng of others, each laden like itself, and without a moment’s delay it hurries along the well-worn path. As it proceeds, other paths, each thronged with busy workers, come in from the sides, until the main road often gets to be seven or eight inches broad, and more thronged than the streets of the city of London.
>
> “After travelling for some hundreds of yards, often for more than half a mile, the formicarium is reached. It consists of low wide mounds of brown clayey-looking earth, above

and immediately around which the bushes have been killed by their buds and leaves having been persistently bitten off as they attempted to grow after their first defoliation. Under high trees in the thick forest the ants do not make their nests, because, I believe, the ventilation of their underground galleries, about which they are very particular, would be interfered with, and perhaps to avoid the drip from the trees. It is on the outskirts of the forest, or around clearings or near wide roads that let in the sun, that these formicariums are generally found. Numerous round tunnels, varying from half an inch to seven or eight inches in diameter, lead down through the mounds of earth; and many more from some distance around also lead underneath them. At some of the holes on the mounds ants will be seen busily at work bringing up little pellets of earth from below and casting them down on the ever-increasing mounds, so that its surface is nearly fresh and new-looking....

"The ceaseless toiling hosts impress one with their power, and one asks, What forests can stand before such invaders? How is it that vegetation is not eaten off the face of the earth? Surely nowhere but in the tropics, where the recuperative powers of Nature are immense and ever active, could such devastation be withstood.... None of the indigenous trees appear so suitable for them as the introduced ones....

"In June, 1859, very soon after the formation of my garden, the leaf-cutting ants came down upon it, and at once commenced denuding the

young bananas, orange, and mango trees of their leaves. I followed up the paths of the invading hosts to their nest, which was about one hundred yards distant, close to the edge of the forest. The nest was not a very large one, the low mound of earth covering it being about four yards in diameter. At first I tried to stop the holes up; but fresh ones were immediately opened out. I then dug down below the mound and laid bare the chambers beneath, filled with ant-food and young ants in every stage of growth. But I soon found that the underground ramifications extended so far and to so great a depth, whilst the ants were continually at work making fresh excavations, that it would be an immense task to eradicate them by such means; and notwithstanding all the digging I had done the first day, I found them as busily at work as ever at my garden, which they were rapidly defoliating. At this stage our medical officer, Dr. J. H. Simpson, came to my assistance, and suggested the pouring carbolic acid, mixed with water, down their burrows. The suggestion proved a most valuable one. We had a quantity of common brown carbolic acid, about a pint of which I mixed with four buckets of water, and, after stirring it well about, poured it down their burrows. I could hear it rumbling down to the lowest depths of the formicarium, four or five feet from the surface. The effect was all that I could have wished; the marauding parties were at once drawn off from my garden to meet the new danger at home. The whole formicarium was disorganized. Big fellows came stalking up from the cavernous regions below, only to descend again in the utmost perplexity.

“Next day I found them busily employed bringing up the ant-food from the old burrows and carrying it to a new one a few yards distant; and here I first noticed a wonderful instance of their reasoning powers. Between the old burrows and the new one was a steep slope. Instead of descending this with their burdens, they cast them down on the top of the slope, whence they rolled down to the bottom, where another relay of laborers picked them up and carried them to the new burrow. It was amusing to watch the ants hurrying out with bundles of food, dropping them over the slope and rushing back immediately for more. They also brought out great numbers of dead ants that the fumes of the carbolic acid had killed. A few days afterwards, when I visited the locality again, I found both the old burrows and the new one entirely deserted, and I thought they had died off; but subsequent events convinced me that the survivors had only moved away to a greater distance. It was fully twelve months before my garden was again invaded. I had then a number of rose-trees, and also cabbages growing, which the ants seemed to prefer to everything else. The rose-trees were soon defoliated, and great havoc was made amongst the cabbages. I followed them to their nest, and found it about two hundred yards from the one of the year before. I poured down the burrows, as before, several buckets of water with carbolic acid. The water is required to carry the acid down to the lowest chambers. The ants, as before, were at once withdrawn from my garden; and two days afterwards, on visiting the place, I found all the survivors at work on

one track that led directly to the old nest of the year before, where they were busily employed making fresh excavations. Many were bringing along pieces of the ant-food from the old to the new nests; others carried the undeveloped white pupæ and larvæ. It was a wholesale and entire migration; and the next day the formicarium down which I had last poured the carbolic acid was entirely deserted.

"Don Francisco Velasquez informed me in 1870 that he had a powder which made the ants mad, so that they bit and destroyed each other. He gave me a little of it, and it proved to be corrosive sublimate. I made several trials of it, and found it most efficacious in turning a large column of the ants. A little of it sprinkled across one of their paths in dry weather has a most surprising effect. As soon as one of the ants touches the white powder it commences to run about wildly, and to attack any other ant it comes across. In a couple of hours round balls of the ants will be found all biting each other; and numerous individuals will be seen bitten completely in two, whilst others have lost some of their legs or antennæ. News of the commotion is carried to the formicarium, and huge fellows, measuring three quarters of an inch in length, that only come out of the nest during a migration or an attack on the nest or one of the working columns, are seen stalking down with a determined air, as if they would soon right matters. As soon, however, as they have touched the sublimate, all their stateliness leaves them; they rush about, their legs are seized hold of by some of the smaller ants already affected by the poison, and they

> themselves begin to bite, and in a short time become the centre of fresh balls of rabid ants."[67]

I wish I could quote all Mr. Belt's interesting article; for his conclusion as to the use the ants make of the bits of leaf they are so incessantly collecting, is an ingenious one, and probably true. It is certain that the little fellows are never seen taking a nibble of their burdens, which would probably be the case if this material was intended for food; and Mr. Belt thinks that the smaller ants, who seldom leave the nest and never carry leaves, have the task of cutting the leaves up into very small bits, which serve as manure for a minute fungus, which is the real ant-food. It seems that "some of the ants make mistakes, and carry in unsuitable leaves; thus grass is always rejected by them. But I have seen some ants, perhaps young ones, carrying leaves of grass; but after a while these pieces are always brought out again and thrown away. I can imagine a young ant getting a severe ear-wigging from one of the major-domos for its stupidity."

QUICHÉ PRAYER.

Here is a translation I have made from the Spanish version given by Milla of a Quiché prayer; and as the petitioner is a supposed Christian, it will serve to illustrate the theological status of the Indio converts, and no less of their descendants of the present day. Compare it with the heathen prayer (p. 249):—

> "O Jesus Christ my God, thou God the Son with the Father and the Holy Spirit art but one God! To-day on this day, at this hour, on this

day of Tijax, I invoke the holy spirits who attend the dawn and the last glimmerings of day! With the holy spirits I pray to thee, O chief of the Genii who dwell in this mountain of Sija-Raxquin! Come, blessed spirits of Juan Vachiac, of D. Domingo Vachiac, of Juan Ixquiaptop; blessed spirits of Francisco Ecoquij, of Diego Soom, of Juan Tay, of Alonso Tzep; holy spirits, I repeat, of Diego Tziquin and Don Pedro Noj; you, O priests, to whom all things are open, and thou Chief of the Genii; ye Gods of the mountain, Gods of the plain, Don Puruperto Martin,—come, accept this incense, accept now this candle! Come also mother mine, holy Mary, and thou my Lord of Esquipulas, the Lord of Capetagua, ... Captain Santiago, Saint Christopher, ... thou Lord and King Pascual, be present here! And thou frost, thou God of the plain, thou God Quiacbasulup, thou Lord of Retal-euleu [here follows a long list of names of towns and mountains]! I make myself compadre and comadre, I who pray; I am the witness and the brother of this man who makes himself your son, of this man who prays. O blessed spirits, suffer no evil to come to him, nor let him be in any way unhappy! I the one who speak, I the priest, I who burn this incense, I who pray for him, I who take him under my protection, I beseech you that he may easily find his food. Do thou then, God, send him his money; do not allow him to get sick with fever, let him not become paralytic, let him not be choked with a cough, let him not be bitten by a serpent, let him not be swollen with wind nor asthmatic, let him not become mad nor be bitten by a dog, let him not perish by a

thunderbolt, suffer him not to perish by rum, nor die by sword or stave, neither let an eagle snatch him away; assist him, O clouds! assist him, O lightnings! assist him, O thunderclap! Aid him, Saint Peter, aid him, Saint Paul, aid him, thou Eternal Father! I then who have spoken for him thus far, I pray that sickness may come upon his opponents; grant that when his enemy goes forth from his house he may encounter sickness; grant likewise that wherever he may please to go, there he may meet with difficulties. Do your duty against enemies wherever they may be; do it as I pray you, blessed spirits! God be with you! God the Father, God the Son, God the Holy Ghost! So be it! Amen, Jesus!"

THE NAMES OF GUATEMALTECAN TOWNS.

It is uncertain whether at the present day any of the aboriginal names of places survive, for the successive invaders from the North or from beyond the seas, if they did not utterly destroy towns, imposed new names on the conquered places. We speak of the ruins of Palenque or of Quirigua, but we do not know the former names of these places, and call them, for convenience, by the name of the nearest modern village. Much ingenuity has been expended in the derivation of Indian names still extant, even the name of the republic itself being one of the undetermined ones; for while Guatemala is undoubtedly taken from the name of the Cakchiquel capital, Tecpan Quahtemalan, it is not known whether this was named for Prince Jieutemal, or indeed whether the prince of that name ever existed.

Quiché is derived from *qui*, "many," and *che*, "trees;" or from *queche*, *quechelau*, meaning "a forest,"—an inappropriate name now. No less questionable are the derivations of *Tucurúb*, "town of owls;" *Es(Itz)cuintla(n)*, "land of dogs;" *Izmachi*, "black hair;" and many others.

The termination *pan* means a "standard" or "chief place;" hence, *Mayapan* of the Mayas, and *Totonicapan* of the Totonaques. *Tepec* is a "mountain," or "high place;" hence, Alotepeque, Coatepeque, Olintepeque, Jilotepeque, and Quezaltepeque,—all of them in mountainous regions, the second being a volcano of considerable height. *Tlan* means a "city" or "home;" hence, *Atitlan*, "the home of the old woman (Atit)," *Zapotitlan*, etc. The most common termination is *tenango*, a Mexican word with much the same meaning as *tlan*,—*Huehuetenango* being equivalent to "the ancient abode;" *Chimaltenango* to "the House of the Shield."

A troublesome matter is the varying and uncertain orthography of most of the names now in use. Goattemala, Gautemala, Guatimala, are all used by writers. The termination *pan* is often in official publications spelled *pam*. Quezaltenango is properly, though seldom, written Quetzaltenango; and Cumarcah or Gumarcah, Izabal or Yzabal, Jutiapa or Xutiapa, are common variations. The omission of the letter *n* in such words as Montezuma and Montagua, and at the end of Escuintlan, is the rule in Guatemala; but foreign writers do not always regard it. The interchange of *b* and *v* is common,—as *bejuco* or *vejuco*; *benta* or *venta*. So far as sound goes, the name of the large macaw may be *Juacamalla* or *Guacamaya*. *Tzololà* was one form of *Sololà*; *Taltic*, of *Tactic*; and *Mictlan*, of *Mita*.

It is quite possible that Soconusco is derived from *xoconochtli*, a word meaning “wild figs,” and Honduras from *fonduras*, meaning “depths,” although the application may not be clear at the present day. More satisfactory are *Michatoyatl*, “a river abounding in fish;” *Paxa*, “water which separates,”—the Rio Pax, or Paz, having always been the boundary between Guatemala and San Salvador. *Tonalá*, the “City of the Sun,” and *Gumarca(a)h*, “ruined houses,” are generally admitted to be correct derivations.

The Spanish invaders exhibited slight inventive powers, and some half a dozen saints were made godfathers and godmothers to all the Indian towns that were important enough to be rechristened; and Santos Juan, José, Tomas, and Marcos, and Santas Maria, Lucia, Ana, and Catarina are the favorites, although Pedro, Esteban, Jago, Miguel, Antonio, Cristoval, Pablo, Izabal, and Clara are by no means neglected. The proper name of the capital city of Guatemala is Santiago (St. James); and if the ambitious projects dear to the late President Barrios should be accomplished, as seems not improbable, England will have to be satisfied with St. George, and leave “The Court of St. James” to the Central American kingdom.

To the Anglo-Saxon such names as True Cross, Holy Cross, Thanks to God, City of Angels, Nativity, and Holy Saviour seem wholly inappropriate as names of places; but to the devout Spaniard they were evidently favorite appellations. Nor are they very different from Praise-God Barebones, Faith, Prudence, and the like, which we know were not uncommon appellatives among the Puritans.

NO RUINS OF DWELLINGS.

In all the remains of ancient cities or holy places hitherto discovered in Central America, there are temples or oratories, and so-called palaces, but not a sign of human habitations; even the palaces are apparently too small for comfortable habitation, and the temples would not admit more than four or five persons at the same time. Herrera says there "were so many and such stately Stone Buildings that it was amazing; and the greatest Wonder is, that, having no Use of any Metal, they were able to raise such Structures, which seem to have been Temples, for their Houses were always of Timber and thatched." Always of less durable material than stone, the houses have disappeared, and we must not infer that there were no dwellers about the places where we find to-day only monuments of the dead or religious edifices. At the present time there is many a village in Guatemala where the church is the only building of masonry, all the houses being of the most perishable materials, as palm stems and leaves, bark and mud. If the town of Livingston were destroyed to-day and not rebuilt, there would be nothing on the site after two years to show that men had ever lived there.

It would certainly be interesting to learn why many of the temples have doors, passages, and even rooms that a man of average stature cannot stand erect in.

MIXTURE OF RACES IN CENTRAL AMERICA.

To show how difficult the study of race peculiarities must be in a country where there is so much amalgamation, I give a list of the names of

some of the crosses:—

Crosses.	Male.	Female.
Mestizo (Ladino)	Spaniard.	Indian woman.
Castiso	Spaniard.	Mestiza.
Español	Castiso.	Spanish woman.
Mulato	Negro.	Spanish woman.
Morisco	Spaniard.	Mulata.
Albino	Morisco.	Spanish woman.
Tornatras	Albino.	Spanish woman.
Tente en el aire	Tornatras.	Spanish woman.
Lobo (wolf)	Negro.	Indian woman.
Caribujo	Lobo.	Indian woman.
Barsino	Coyote (Indigene).	Mulata.
Grifo	Lobo.	Negress.
Albarazado	Coyote.	Indian woman.
Chaniso	Indio.	Mestiza.
Mechino	Coyote.	Loba.

GUATEMALTECAN COOKERY.

I do not speak of the tables of the upper classes, where variety is found in Guatemala as well as elsewhere; but of the common cookery that a stranger finds in travelling, it may truly be said that it has not a national character, nor does justice to the abundant material at hand. What there is of it is, however, good; a fresh tortilla is better than the

cakes of the Northern backwoods, and the wheaten bread made by the *panadero* of the village is exceedingly palatable. Frijoles, or beans, the most popular general dish, are always stewed over an open fire, and are much better than the baked beans of New England. Eggs are always present, either fried, poached, or baked in the shell (*huevos tibios*); when fried, always seasoned with tomato, chillis, and vinegar. *Salchichas*, or sausages, fried in lard, with plenty of garlic; *gigote*, or hashed meat; *higate*, a potage made of figs, pork, fowl, sugar, ginger, cinnamon and allspice, bread, soup, and innumerable ollas,—are present as solid dishes, the meats generally being of poor quality. Besides the vegetables of Northern gardens, there are *chiotes*, palm-cabbage, and, best of all, plantain. For *verduras*, or greens, there are many plants,—none, however, better than spinach or dandelions; and the *ensaladas* are not remarkable. In the shore region one can have most delicious turtle-steak, white and tender as veal, iguanas fricasseed,—perhaps the best native dish,—javia-steaks, armadillo (which I am sorry to say I have not eaten), and fish of many kinds and flavors.

I have spoken of the bad coffees served as “esencia,” but have not said enough about the chocolate, which I never found carelessly prepared. Perhaps the best is prepared entirely at home; that is, the beans of cacao are carefully roasted, as coffee might be, and the shells removed by rubbing in the hands. The metatle then serves to crush the oily mass, as corn is prepared in tortilla-making; sugar is added, and enough cinnamon or vanilla to flavor the crushed cacao, which becomes pasty by grinding, and may be run into moulds, or simply dropped on some cool surface to harden. These chocolate-drops are dissolved in boiling milk as wanted, and the

whole churned to a froth. Prepared in this way, chocolate is much better than the cake chocolate of the manufacturers. An ancient recipe was much more complicated than this, and although I have never tried it myself, I venture to give it to my readers. It is this: “One hundred cacaos,—treating them as has been described,—two pods of chilli, a handful of anis and orjevala, two of mesachasil or vanilla (this may be replaced by six roses of Alexandria, powdered), two drams of cinnamon, a dozen each of almonds and filberts, half a pound of white sugar, and arnotto to color it.” This mixture must of course be whipped to a froth.

Perhaps the people of Guatemala are as cleanly as others; but according to our observation the common practice was to allow the dogs to lick the dishes, which received no additional washing. It was the custom also at the table d’hôte in the hotels to finish a meal by filling the mouth with water and spurting it on the tiled floor. Once, when we stopped at a way-side house to get some coffee, the señora made a little fire out of doors, put the coffee in a very black pot to boil, and, after fanning the reluctant fire with her straw hat, threw herself on the ground near by to rest and smoke her *puro*. When the pot was near to boiling, she reached out her bare leg and tested the temperature of the contents with her toe, as a Northern cook might have used his finger. Frank was scandalized; but, after all, it was merely a matter of taste.

PHOTOGRAPHS USED IN ILLUSTRATION.

In stating that the scenes illustrated in this book are all from photographs, it may be added that the clearness of the atmosphere enables a distant view to

be taken with great distinctness (unfortunately lost in the mechanical reproductions) even in minute details. The lens used for views not requiring extreme rapidity was the Dallmeyer single landscape, —a lens unsurpassed for its purpose; while for architectural subjects, or those in motion, a Ross rapid rectilinear was generally used. The plates were those prepared by Allen & Rowell, of Boston,—as usual, of the finest quality. For apparatus, the camera was a 5 × 8 size of the American Optical Company's make, fitted with a changing box containing eighteen plates, and also with an attachment, arranged by the author, for making two or three smaller pictures on the 5 × 8 plate. I carried no tent, but changed my plates at night under a blanket, depending on touch rather than sight. For the stereoscopic pictures, I used a pair of Euryscope No. 0 lenses. The plates were developed months afterwards, with a very small percentage of failures. In later journeys in Guatemala I have used plates of the 8 × 10 size; but for all purposes of illustration the 4 × 5 size is to be preferred. For packing the plates I have used a strong barrel and cork-dust with complete success. It is a matter of deep regret that the method of mechanical reproduction utterly destroys all the beauty of the original photographs. In cases where phototypes are presented from ink-drawings, these have generally been drawn directly from a transparency which I have made from the original negative and projected in the lantern. The drawings are of large size, and reduced to one quarter, or even less, in the phototype. This method insures at least accuracy of outline.

MONEY IN GUATEMALA.

Persons interested in silver coinage might have a good field for collection here; and one of the Government collectors, who had a fancy for numismatics, showed me a curious lot he had received in payment of taxes. Maximilian coins from Mexico were the rarest; but every country of Central and South America was well represented. Among current coins the dollar of Peru and Chili (*sols*) are most common; and the smaller change is mainly in Guatemalan and Hondureñan currency. The dollar (*peso*, piece of eight) contains eight reals, and the real two medios, or four cuartillos. This last is the smallest coin used, although the cent (*centavo*) has been coined. A real is twelve and a half cents, a medio six and a quarter, and a cuartillo three and an eighth; but in the text I have spoken of these coins as valued in gold, or, approximately, ten, five, and three cents.

CERTAIN HEIGHTS DETERMINED BY THE FRENCH EXPEDITION.

Tactic	4,725
Coban	4,356
San Cristobal	4,643
San Miguel Uspantán	6,040
Cunen	5,942
Sacapulas	3,826
Santa Cruz del Quiché	6,621
Quezaltenango	7,697
Totonicapan	8,150
Sololà	7,041
Guatemala City	5,013
Antigua	5,072

Ciudad Vieja	5,151
Escuintla	1,450
Amatitlan	3,901
Palin	3,753
Cuajinicuilapa	2,848
Cerro Redondo	3,542
Los Esclavos	2,394
Agua Blanca	2,658
Suchitan	4,108
Santa Catarina (Rio)	2,251
Santa Catarina (Pueblo)	2,324
Esquipulas	2,986
Paso del Rodeo	2,744
Los Horcones	3,637
Piedra de Amolar	2,340
Copan	1,830
Vado Hondo	1,237
Chiquimula	1,244
Zacapa	449
Pacaya	8,366
Volcan de Agua (summit)	12,313
” ” (S. Maria)	6,828
” ” (crater bot.)	12,087
Volcan de Fuego	13,127
” ” (La Meseta)	12,001
Acatenango	13,616
Volcan de Atitlan	11,723
Cerro Quemado	10,201
Santa Maria	11,483
Lago de Atitlan	5,112
Lago de Amatitlan	3,895

Lago de San Cristobal	4,643

I find it impossible to reconcile some of these measurements of the French Expedition with my own or those of other observers; but usually the difference is not greater than might be expected from observations with the aneroid barometer.

WEIGHTS AND MEASURES.

Land is usually bought and sold by *caballerias* (33.33 acres), *hectareas* (2.47 acres), *manzanas* (a square of one hundred yards), or *varas* (2.78 feet). The most common weights are the *quintal* (a hundredweight) and the *arroba* (25 pounds of 16 ounces each). Among the Indios other weights and measures are used, but I could find no trustworthy information about them. They also retain the old cacao currency to some extent, and I have been offered cacao-beans for small change, as the cuartillo is not common away from the large cities.

400	cacao beans	=	contle.	
8,000	" "	=	jiquipil	= 20 contles.
24,000	" "	=	carga	= 3 jiquipile

A LIST OF PLANTS OBSERVED IN GUATEMALA.

I am indebted to my friend Professor Sereno Watson, of Harvard, for the identification of species, which to the number of sixty he has already determined from some five hundred that he collected in the Departments of Livingston and Izabal. I did

not myself make any collection, but noted the genera that were familiar to me as I travelled through the country. So little has been published about the Guatemaltecan Flora that I have ventured to add these notes to Professor Watson's list.

Clematis americana, Will. Near Izabal.

dioica, L. Panajachel.

caripensis, HBK. Sacapulas, Jutiapa.

polycephala, Bert. V. de Agua.

sericea, HBK. San José.

Davilla rugosa, Poir. Banks of Rio Dulce, Rio Chocon.

lucida, Presl? Chocon.

Doliocarpus pubens, Mart. Livingston.

Curatella americana, L. Dry hills near Quirigua.

Tetracera n. sp. Rio Chocon.

Guatteria Jurgensenii, Hemsl. Shores of Lago de Izabal, Chocon.

n. sp.

Anona squamosa, L. Livingston, muricata, L. Cunen, Uspantán.

Anona Cherimolia, Mill. Common.

palustris, L. Sea-shore near Livingston.

Xylopia frutescens, Aubl., var. glabra. Shores of Lago de Izabal.

Cissampelus Pareira, L. Izabal, Rio Dulce.

tropæolifolia, DC.? Izabal.

Nymphaea ampla, DC. Rio Polochic, mouth of Rio Chocon.

Argemone mexicana, L.

Draba vulcanica, Benth. V. de Agua.

Cleome polygama, L. San Felipe.

Moringa pterygosperma, Gaertu. Zacapa, Chiquimula.

Bixa Orellana, L.

Xylosma nitida, A. G.

Alsodeia guatemalensis, Watson. Rio Chocon.

Oncoba laurina, Oliver. Izabal, Rio Chocon.

Casearia Brighami, Watson. Chocon.

Polygala asperuloides, HBK. Izabal.

Jatropha Curcas, L.

Janipha Manihot, HBK.

Croton. (Several sp. on coast, not determined.)

Euphorbia Poinsettii. Uplands.

Hura crepitans, L. Sacapulas, Zacapa.

Two euphorbiaceous trees in eastern highlands.

Drymaria cordata, Willd. Lago de Izabal.

Quercus (2 sp.). Cunen to Quiché.

Portulaca oleracea, L. Livingston, Chocon.

Phytolacca icosandra, L. Antigua, Santa Cruz del Quiché.

Amaranthus paniculatus, L. Cunen, Jutiapa.

Sida rhombifolia, L. Chocon.

Abutilon. (Trees at La Tinta. Several allied sp. banks of Rio Chocon.)

Hibiscus Abelmoschus, L. Izabal.

Gossypium barbadense, L. Livingston.

Hampea (?) stipitata, Watson. Large tree, Chocon.

Paritium tiliaceum, A. Juss. Shore near Santo Tomas.

Pavonia racemosa, Swartz. Rio Dulce.

Eriodendron ceiba. Sacapulas, Chocon, Quirigua.

Bernoullia flammea, Oliv. Istapa.

Cheirostemon platanoides, Hum. & Bon. V. de Fuego, Encuentros.

Helicteres guazumæfolia, HBK. Cerro del Mico.

Pachira macrocarpa. Rio Chocon, Motagua.

insignis, Sav. Red petals at Omoa.

sp. Chocon.

Theobroma cacao, L. Chocon, Quirigua, Pansos.

Guazuma tomentosa, HBK. Chocon.

Gouania tomentosa, Jacq.

Gomphia (Ouratea) guatemalensis, Engler. Chocon.

Vitis sicyoides, var. ovata, Baker. Lago de Izabal.

lanceolata, Watson. Rio Dulce, Rio Chocon.

vulpina, L. var. Izabalana, Watson. Izabal.

Clusia guatemalensis, Hemsl. V. de Fuego.

Large tree, Chocon.

Low, wide-spreading tree, Izabal.

Matapalo tree.

Symphonia globulifera, L. “Hog-gum.” Large tree, Chocon.

Calophyllum Calaba, Jacq. Livingston.

Maregraavia rectiflora, Triana & Planch.

var. Goudoutiana. Chocon.

Ruyschia Souroubea, W. Livingston.

Sauraujia oreophila, Hemsl. V. de Fuego.

pauciserrata, Hemsl. V. de Fuego.

Sauvagesia erecta, L. Cerro del Mico.

tenella, Lam. Barbasco.

Salix (2 sp.). Lago de Izabal, Rio Polochic, Amatitlan.

Erythroxylum sp. Livingston.

Linum guatemalense, Benth. V. de Agua.

Byrsonima crassifolia, HBK. Cult. Izabal.

Bunchosia Lanieri, Watson. Tree, Izabal.

Lindeniana, Juss. Cuilapa.

Stigmaphyllon Lupulus, Watson. Chocon.

Hiræa reclinata, Jacq. Rio Dulce.

sp.? Chocon?

Cardiospermum grandiflorum, Swartz, var. hirsutum, Radl. Izabal.

Halicacabum, L. Rio Chocon.

Serjania mexicana, Willd. Rio Chocon.

Paullinia sorbilis, Mart. Chocon.

velutina, DC. Chocon.

guatemalensis, Turcz.

Melia Azederach, L. Escuintla, Izabal, naturalized.

Guarea bijuga, C. DC.? Chocon.

Swietenia Mahogani, L. Chocon, Quirigua.

Cedrela odorata, L. Chocon.

Citrus medica, var. Limonum. Naturalized.

Oxalis dendroides, HBK. Cerro del Mico, 1500 ft.

Tribulus cistoides, L. Shores.

Guaiacum officinale, L.

guatemalense, Herb. Kew, Zacapa.

Quassia amara, L. Shores of Lago de Izabal.

Picræna excelsa, Lindl.? Chocon.

Alvaradoa amorphoides, Liebm. (?) Chocon.

Hippocratea ovata, Lam. Rio Dulce.

Wimmeria discolor, Schlecht. Rio Dulce.

Zizyphus guatemalensis, Hemsl.

Ficus (3 + sp.). Chocon.

Cecropia palmata, W. Rio Chocon.

Dorstenia contrayerva, L. Chixoy Valley.

Castilloa elastica, Cervant.

Maclura aurantiaca, Nutt.

Peperomia (2 sp.). On trees, Chocon.

Bursera gummifera, L.? Chocon.

Spondias lutea, L. Chocon.

purpurea, L. “Jocote.”

sp.? “Maho.” Chocon.

Rourea glabra, HBK. Lago de Izabal.

Connarus Pottsii, Watson. Shores at Izabal.

Mangifera indica, L. Naturalized.

Anacardium occidentale, L. Cayo Paloma, Pacific coast.

Quercus (2 sp.). Uplands above Cunen.

Indigofera anil, L.

Tephrosia toxicaria, Pers.

Sesbania exasperata, HBK.

Desmodium. 2 sp. at Chocon, another at El Mico.

Mucuna puriens, DC. Vado Hondo.

Erythrina velutina, W. Livingston.

Myroxylon Pereirac, Klotzs. Escuintla.

toluiferum, HBK. S. Coast.

Poinciana pulcherrima, L. Antigua.

Hæmatoxylon campechianum, L. Usumacinta Valley.

Guilandina bonduc, L. Shores.

Cæsalpinia (2 sp.). Chocon and Pacific.

Dalbergia calycina, Benth. Chocon.

Cassia fistula, L.

2 sp. common at Livingston, another at Antigua.

Tamarindus indica, L.

Hymenæa courbaril, L. Rio Chocon, Rio Polochic.

Bauhinia (2 sp.). Chocon, Quirigua.

Entada scandens, Benth. Chocon.

Prosopis juliflora, DC. Dry uplands.

Mimosa pudica, L.

casta, L. Livingston.

guatemalensis, Benth.

Acacia Farnesiana, W. Jutiapa, Cuilapa.

spadicigera, Schlecht.

arabica, W. Jutiapa. (4 + others.)

Calliandra saman, Gr. Santo Tomas.

Pithecolobium sp. Vado Hondo.

Inga vera, W. Rio Chocon, Rio Polochic.

Schizolobium sp. “Wild tamarind.” Rio Dulce, Rio Chocon.

Chrysobalanus Icaco, L. Shores.

Hirtella americana, Aublet. Chocon.

Rubus sp. Alta Verapaz.

Jambosa vulgaris, DC. Rio Dulce.

Psidium guava, Radd. Pansos, San Felipe.

sp. Quirigua, Rio Polochic.

Jussiæa repens, L. Rio Polochic.

Rhizophora Mangle, L. Rio Dulce, Santo Tomas.

Cacoucia coccinea, Aublet. Rio Chocon, common.

Terminalia Catappa, L. Naturalized, San Pedro Sula.

Persea gratissima, G. Naturalized.

Orcodaphne sp. Cunen.

Sechium edule, Sw. West coast, Cerro Redondo.

Cucumis Anguria, L. Punta Gorda.

Luffa acutangula, Roxb. West coast.

Lagenaria vulgaris, Sw.

Cyclanthera explodens, Naud. V. de Fuego.

Microsechium guatemalense, Hemsl. Trujillo, Palin.

Fevillea, sp.

Carica Papaya, L.

sp. with small, unedible fruit. Valleys of Volcan de Fuego.

Passiflora Brighami, Watson. Livingston, Rio Chocon.

edulis, Sims.

guatemalensis Watson. Chocon.

choconiana, Watson,

lunata, Willd.

coriacea, Juss.

quadrangularis, L. Antigua.

3 sp. Rio Chocon, 1 El Mico, small plant with veined leaves, Chocon.

Turnera sp. San Pedro.

Aristolochia, sp. with immense blossoms. Roatan.

Cereus (2 sp.). Jutiapa, Zacapa, Chixoy.

Opuntia coccinellifera, Mill. Antigua, Amatitlan.

Begonia scandens, Sw. Chocon.

2 sp. Chocon, 1 at Uspantán.

Ximenia americana, L. Livingston.

Loranthaceae. 3 sp. observed. Chocon, Zacapa.

Sambucus sp. Encuentros, Sololà.

Rondeletia cordata, Benth. Guatemala City.

gracilis, Hemsl. Coban.

Psychotria sp. Rio Chocon.

Bouvardia sp. Cunen.

leiantha, Benth. Chimaltenango.

Exostemma sp. Livingston.

Ageratum conyzoides, L. Common.

Stevia sp. Quiché, Cunen.

Mikania guaca. Chocon.

Wedelia phyllocephala, Kemel. Chixoy Valley.

Verbesina gigantea, Jacq. Zacapa.

Dahlia sp. Quiché, Quezaltenango.

Tagetes micrantha, Cav. V. de Fuego.

sp. 2. San Cristobal, Patzùn.

Lobelia fulgens, Willd. Uplands.

calcarata, Bertol. V. Santa Maria.

cordifolia, H&A. Coban.

Lobeliaceæ (3 sp.).

Chrysophyllum Cainito, L.

Sapota Achras, Mill.

Lucuma mammosa, G.

multiflora, A. DC. (?) Chocon.

Jasminum officinale, L. Naturalized.

Allamanda cathartica, L. Rio Chocon, Rio Polochic.

Vinca rosea, L.

Plumeria rubra L. (?) Several members of this family on Rio Chocon.

Asclepias curassavica, L. Livingston, Uspantán, Antigua.

Limnanthemum Humboldtianum, Gr. Lagoons, Rio Chocon.

Datura (Brugmansia) suaveolens, Humb., Bonpl. Izabal.

Physalis peruviana, L.

Capsicum frutescens, L.

annuum, L.

Crescentia Cujete, L. Jutiapa and dry uplands generally.

Jacaranda sp. Fine tree, Chocon.

Bignoniaceae. 3 sp. Chocon forests, 1 sp. Antigua.

Achimenes coccinea, Pers. Chixoy Valley.

Martynia sp. Chixoy Valley.

Jacobinia aurea, Hemsl. Chocon, Quirigua.

Ipomœa bona-nox, L.

Batatas, Lam.

Quamoclit, L.

Calonyction sp. Eight other convolvulaceæ noticed.

Cuscuta sp. Zacapa.

Cordia Sebestina, Jacq. Escuintla.

Heliotropium curassavicum, L. San José.

Salvia coccinea, L. Santa Cruz del Quiché. 3 other sp.

Lantana sp. Esquipulas.

Avicennia nitida, Jacq. Golfete.

Pinus cubensis, Griseb.

macrophylla, Parlat.

Ayacahuite, Erenb.

filifolia, Lindl.

Abies sp.

Monstera (2 sp.). Livingston, Chocon.

Aroids of many sp. and several genera.

Wolfia punctata, Gr. Rio Chocon.

Typha sp.

Euterpe oleracea, Mart.

edulis.

Oreodoxa oleracea.

Manicaria Plukenetii, Gr. and Wendl.

Livingston.

Desmoncus sp.

Acrocomia vinifera, Oersted. Izabal, Chixoy Valley.

Acrocomia sclerocarpa.

Cocos nucifera, L.

Attalea cohune, Mart.

Bactris balanoidea, Wendl. Izabal.

cohune, Watson. Chocon.

Twenty-five sp. palms were collected at Chocon, but have not been determined yet.

Commelyna cayennensis, Rich. San Felipe, 2 sp. Cunen.

Pontederia sp. pink flowers. Livingston.

Bambusa (2 sp.). Motagua, Chocon.

Zea Mays, L.

Agave americana, L.

ixtli, Karw.

Fourcroya gigantea, Vent.

Pancratium caribæum, L. (?) Cayo Grande, Rio Polochic.

Crinum sp. Rio Dulce.

Smilax officinalis. Chocon.

Ananassa sativa, Lindl. Izabal, Chixoy Valley.

Bromelia Pinguin, L. Jutiapa.

Karatas, Lemair. Jutiapa.

Pita.

Tillandsia (2 sp.).

Bromeliaceæ (several sp.). Rio Dulce.

Heliconia Bihai, L. Pansos, Quirigua.

sp. Quirigua, Rio Dulce.

Renealmia sp.

Zinziber sp.

Maranta (2 sp.).

Vanilla planifolia, Andr. Chocon.

Epidendrum bicornutum, Hook.

Schomburgkia tubicina, Lindl.

Oncidium citrinum, Lindl. Los Amates.

iridifolium. HBK.

Notylia guatemalensis, Watson.

Ornithocephalus Pottsiæ, Watson.

Bletia Pottsii, Watson.

Salvinia auriculata, Aubl.

The number of Orchidaceæ in Guatemala is very large.

A LIST OF WORKS RELATING TO CENTRAL AMERICA.

A full bibliography of works that contain information about the region through which we have

been travelling together would fill a volume much larger than the present; but the following brief list of some of the more important titles may aid those who are interested in the past history or the future prospects of the tropical part of this continent. I have not thought it worth while to mention those unprinted works not at present accessible to the public, nor the ephemeral publications of simple tourists:—

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BERENDT, Dr. C. H. Analytical Alphabet for the Mexican and Central American Languages. New York, 1869. American Ethnological Society.

—— Remarks on the Centres of Ancient Civilization in Central America, and their Geographical Distribution. New York, 1876. Bulletin of the American Geographical Society.

BIOLOGIA-CENTRALI-AMERICANA; or, Contributions to the Knowledge of the Fauna and Flora of Mexico and Central America. London, 1879.

BODHAM-WETHAM, J. W. Across Central America. London, 1877.

BONNYCASTLE, R. H. Spanish America; or, a Descriptive, Historical, and Geographical Account of the Dominions of Spain in the Western Hemisphere, Continental and Insular. London, 1818. 2 vols.

BOTURINI, BENADUCCI. Idea de una Nueva

Historia General de la América Septentrional. Madrid, 1746.

BOYLE, FREDERICK. Wanderings in Nicaragua and Costa Rica. London, 1868.

BRADFORD, ALEXANDER W. American Antiquities and the Red Race. New York, 1841.

BRASSEUR DE BOURBOURG. Histoire des Nations civilisées du Mexique et de l'Amérique Centrale durant les siècles antérieurs a Christophe Colomb, écrite sur les documents originaux et entièrement inédits, puisés aux anciennes archives des Indigènes. Paris, 1859. 4 vols.

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—— Voyage sur l'Isthme de Tehuantepec dans l'état de Chiapas et la république de

Guatemala (1859-1860). Paris, 1861.

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the destruction of a | bove Forty Millions of People. | With the Propositions offer'd to the King of Spain, | to prevent the further Ruin of the West Indies. | By Don Bartholomew de las Casas, Bishop of Chiapa, | who was an Eye | -witness of their Cruelties. London, 1699.

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From an Ancient Manuscript.

FOOTNOTES

[1] Petermann's Mittheilungen, 1869.

[2] This business is declining, owing to the inferior cattle produced in Florida and shipped at a cheaper rate.

[3] Guatemala has been accepted (1886) by both Nicaragua and Costa Rica as referee in the boundary dispute.

[4] Another year we climbed the rock and found several interesting plants, but no human remains.

[5] These were vampire bats (*Phyllostoma sp.*); and several times afterwards we saw cattle that had been so severely bitten that the blood was still dripping from their shoulders the next morning. These little fellows are about the size of an English sparrow; and yet they do as much harm as their much larger relatives of South America. They have ventured into our sleeping-room at Livingston; but would generally awaken us by brushing our faces with their wings,—perhaps because our feet (the part they usually attack) were covered.

[6] "These serpentes are lyke unto crocodiles, saving in bigness; they call them guanas. Unto that day none of owre men durste aduenture to taste of them, by reason of theyre horrible deformitie and lothsomnes. Yet the Adelantado being entysed by the pleasantnes of the king's sister, Anacaona,

determined to taste the serpentes. But when he felte the flesh thereof to be so delycate to his tongue, he fel to amayne without al feare. The which thyng his companions perceiuing, were not behynde hym in greedyness; insomuch that they had now none other talke than of the sweetnesse of these serpentes, which they affirm to be of more pleasant taste than eyther our phesantes or partriches."—*Peter Martyr, decad. i. book v. (Eden's English translation).*

[7] The Naturalist in Nicaragua, by Thomas Belt, p. 222.

[8] Should the new product, saccharine, meet with favor, the planting of cane will follow the fate of indigo; and coal-tar will supply the sweet things of life as well as the flavors and colors. Coal is "sweetness and light"!

[9] Its armament was approved by the Royal Seal, Nov. 7, 1658, and an order of Feb. 26, 1687, provided for its complete repair. The plan is from a sketch by F. E. Blaisdell.

[10] I may add that soon after our arrival in Coban the Jefe politico deposed this unworthy comandante, punishing him with various indignities.

[11] Owing to the heavy duty, iron stoves are seldom seen in Guatemala; but a structure of stone, where that material is at hand, elsewhere of sticks covered with clay, is reared to the height of about two feet. Its size depends, of course, on the wants of the household; but large or small, the form is always the same. Three suitable stones, forming what would correspond to a pot-hole in an ordinary stove, are embedded in the clay-top of this house-altar, and the long slim sticks that furnish fuel serve also as poker,

shovel, and tongs. There is no chimney, but the smoke and steam escape by the many cracks in the walls or by the windows. On one stone tripod a *comal* for tortillas, on another an earthen pitcher of coffee, and on another a stew-pan (*cazuela*) of frijoles, is the usual kitchen arrangement. Answering its purpose as well as a costly stove, it may be built for a few reals; and if an oven is needed for bread, a stone and earthen dome built over such a table-like hearth makes a capital one, not unlike those so common among the Canadians and in other half-civilized countries.

[12] In 1882, $1,266,042.43, or about one fifth of the total revenue.

[13] The uses of pottery in Central America are almost universal; it supplies not only water-cisterns, flour-barrels, ovens, stoves, wash-tubs, baths, coffee-pots, stew-pans, but dishes, lamps, floors, roofs, and aqueducts. Some made of white clay is exceedingly light, and the patterns are often very tasteful. The *tinajas* (water-jars) and *cántaras* are also light, but very strong, while the *cazuelas*, or flat pans, and the coffee-pots are quite fire proof. I have seen a house-wall built of pots not unlike a Yankee bean-pot in shape, the mouths opening into the house being “pigeon-holes” for the human inhabitants; while those opening out of doors were the nesting-places of pigeons and hens. The roof-tiles are not in great variety, usually semicylindrical or conical, and seldom ornamented; floor-tiles are large, square, and not very thick. The porous water-jars suspended in a current of air keep their contents refreshingly cool.

[14] Calabashes are of great importance and of universal use as household utensils. Some varieties are long and slim, and these, split

lengthwise, make ladles; the very spherical ones make boxes, flat ones form bowls and platters, while those of the shape illustrated become chocolate-cups. The black color is permanent, although scarcely penetrating the hard surface; it is made by a bean that I have not been able to identify. Calabash-cups, although very light, are strong and durable. I have one, given me by Don Ramón Viada of Trujillo, which is as delicate as porcelain.

[15] It is well to explain that the framework used for carrying small articles on the back is called *kataure* by the Caribs, and *carcaste* by the Indios of the interior. Ramón carried in his not only all my photographic apparatus,—the camera and box of plates being carefully wrapped in water-proof material,—but also our cooking utensils and his own luggage. After he left us we found so much trouble in hiring suitable carcastes that we purchased one for a few reals and fitted it up with pita cords, which served our purpose very conveniently. When a desirable view presented, a whistle brought the mozo to our side, and from ten to fifteen minutes only were required to unpack, set up, expose one or two plates, repack, and remount our animals. It may be interesting to state that in all this long journey, where plates were carried in this way, not one was broken, nor was a piece of the apparatus damaged.

[16] There were many similar organs in the old churches,—some, indeed, removed to the lumber-rooms; but they were so securely fastened together that I could not get at the internal mechanism without too much disturbance, and I concluded that the instruments were imported entire. No modern organs of any size were seen outside of the

metropolitan cathedrals; and yet even a large organ is very easy to transport. One little instrument that I tried was not in tune, but the pipe-tones were good. In the old church at Trujillo Frank found a modern French cabinet-organ of remarkably sweet tones.

[17] In stumbling over this crooked name, it occurs to me that it would be fair to my readers, who are perhaps less familiar with Indian names, to state briefly how they are pronounced. *G* is always guttural; *ch* is like *tche*; *h* is strongly aspirate; *j* is pronounced like *h*; *x* is *sh*; *u* is the French *ou*; *v* is equivalent to *w*; and the vowels have the Italian values. Of the Indian names the signification is not always known, but there are certain terminations common enough and well understood; as *tepec*, a mountain or high thing, in Alotepec, Quezaltepec, Coatepeque, Olintepeque, Jilotepeque. Those who are curious in these matters will find another note in the Appendix.

[18] It is the duty of every person to whose house strangers come to pass the night to report to headquarters the name, where from and whither bound, so that we could be tracked all over the republic from the central telegraph office in Guatemala City,—often very useful.

[19] There is no little confusion in the nomenclature of the sapotes, or sapodillas. What is usually called sapote in Guatemala does not belong to the genus *Sapota*, but to an allied genus *Lucuma*, and is known in the West Indies as the mammee-apple. The true sapote has several seeds; the mammee only one. An allied genus contains the star-apple (*Chrysophyllum cainito*). The sapoton, or big sapote, does not even belong to the *Sapota*

family, but is a *Pachira*.

[20] Sweet peas and geraniums in abundance, carnations, marigolds, campanula, yarrow, pinks, sweet-williams, chrysanthemums, iris, scabious, abutilon, poppy, princess'-feathers, fuchsia, linaria, *Lilium candidum*, peach, evening-primrose, gilliflowers, amaryllis, gladioli, alyssum, larkspur, brugmansia, mignonette, sunflower, adenanthera, willow, balsams, dahlia, spider-lily, canna, hollyhock, eucalyptus, ragged-lady, roses (4), yellow sweet-clover, asparagus, *Hydrangea hortensis*, blue African lily, lupine, Boston-pink, wool-pink, cypress, sedum, agave, chelidonium, euphorbia (long-leaved), and broom.

[21] It was here that the Vice-President, Flores, was torn to pieces by women in the last days of the Confederacy, when the Church was in power.

[22] The cases of these rockets were of bambu, and usually three were attached to one stick. As they were fired in daylight, and valued for their effect upon the ear rather than the eye, the proportion of explosive powder was increased,—each discharge giving three sharp cracks.

[23] These little apples—about the size of crab-apples—are tasteless uncooked, but make an excellent *dulce*; the señoras know how to use them for a sweet pickle.

[24] Palin is the market-garden and orchard of the metropolis, and the fruit is good, but not cultivated with any care; nor is there here or elsewhere in Guatemala any attempt to procure new and choice varieties of either fruits or vegetables.

[25] It was in this garden that the attempt

was made to kill President Barrios, on the evening of Sunday, April 13, 1884. He was walking with General Barrundia, the Minister of War, when a bomb exploded, severely wounding both; but to allay public excitement the President bravely walked twice around the garden, and then home. The would-be assassin was captured, and proved to be a former conspirator whom Barrios had generously pardoned. The bomb was loaded with poisoned bullets.

[26] One of these stirrups (seen in the figure), given to me by Don Enrique Toriello, then Jefe at Livingston, now Chargé d'Affaires and Consul-General of Guatemala at New York, weighs five and a half pounds, and is seventeen inches long.

[27] See note on Zompopos in the Appendix.

[28] These acacias not only yield gum-arabic, but the pods contain so much tannin that they are used to make ink.

[29] Another time when Frank was crossing he had to swim for his life, and nearly lost his animals.

[30] Although on the stone, and in the photograph as well, this head has the appearance noted in the text, a more careful examination of the photographic image magnified shows that the upper portion of the seemingly human face is in truth that of a tigre, while the flowing beard is the remaining part of a mutilated human face.

[31] Le mithe de Votan. H. de Charencey, Alençon, 1871.

[32] Pronounced Shibalbay.

[33] Discovered by Spaniards in 1750, but no illustrations were published until 1834.

[34] Meaning dumb, because they could not pronounce certain letters of the Cakchiquel alphabet.

[35] Topiltzin Acxitl, the Tultec king of Copantl.

[36] This recalls the *Kahili*, or feather standard, the symbol of authority in the Hawaiian Islands.

[37] The signification of these names, as given by a distinguished scholar, is as follows: *Hunahpu*, the one master of supernatural power; *Vuch*, opossum; *Gucumatz*, decorated with feathers; *Xmucane*, female vigor; *Xpiyacoc*, membrum virile (*xiphil*, and *ococ*, to enter); *Huracan*, one very great (*hun*, one, and *racan*, great); *Cabracan*, second great one; *Chirakan*, ostium vaginæ; *Tepeu*, high.

[38] It is probable that at this time they circumcised their sons, although we have no direct statement to that effect. The Mayas practised this sanatory measure, which seems to have had no religious significance. Stone knives were used, and only once.

[39] I have often had the pleasure of conversing with cannibals, and they always assured me that the hands were the choicest morsel. It will be noted that, the Central American Indios always boiled their cannibal food, while the Pacific Islanders as generally roasted it. In one of the manuscripts preserved in the Vatican Library is a clear picture of this process, and the kettle seems large enough to receive the body whole.

[40] It is the way of Christian communities to speak with holy horror of the human sacrifices these heathen were accustomed to offer at each new year to their gods; the bloodthirsty Christian Spaniards spoke much

in the same way of these sacrifices three centuries ago. While the Indios did what they honestly believed was right, and did it in a most merciful manner, without torture, the cruel invaders, in the name of the gentle Jesus of Nazareth and of the Mother of God, burned these poor Indios alive by hundreds (Las Casas says by thousands), or gave them to be torn in pieces by the dogs. Let the Christian nations hold their peace over the human sacrifices of Central America, when they remember the Holy Inquisition, St. Bartholomew, and the tortures of Jews, Turks, witches, Quakers, and other heretics, sanctioned by the Christian Church,—murders so cruel, so unprovoked, that they make the sacrifices of the Indios seem no worse than justifiable homicide. Were the sacrifices to Tohil so much more sinful than the sacrifices so common in this enlightened nation of children born, or unborn, to the Molochs of Comfort or Reputation?

[41] The Spaniards found, according to Herrera (Decade III. lib. iv.), paintings done at Utatlan eight hundred years before the Conquest, in which were represented the three kinds of royal insignia,—indicating an antiquity greater than that of the Aztecs.

[42] Monarquia Indiana, lib. ii. ch. xii.

[43] Among the curious illustrations in the Kingsborough Collection are coats of armor belonging to the nobles, consisting of a shirt of simple body-form, embroidered or painted with various devices. With these are helmets, sometimes of conical shape, but frequently in form of animal heads.

[44] Carrera was a servant in the family of the Marquis de Aycinena; afterwards a drummer-boy in the regiment under his

master's command. A pamphlet was published to prove that this young half-breed was a natural son of Aycinena. From the countenance as represented on the coins there is indication of Negro and Indian, rather than Spanish, blood in his parentage.

[45] "Art. 24. El ejercicio de todas las religiones, sin preeminencia alguna, queda garantizado en el interior de los templos; pero ese libre ejercicio no podrá extenderse hasta ejecutar actos subversivos ó practicas incompatibles con la paz y el órden público, ni da derecho para oponerse al cumplimiento de las obligaciones civiles y políticas."

[46] "Lectura, nociones practicas de la lengua patria, conocimientos de objectos, escritura y dibujo lineal, geografía e historia, moral y urbanidad."

[47] A new series of stamps was issued in 1886; and it is reported that they were furnished to the Government free of cost by a private individual, who asked as his only compensation the entire lot of stamps of the old issue then on hand. Evidently the rage for old postage-stamps has a money basis, and this contractor expects to get a corner on old Guatemaltecan stamps; and no doubt he will make profit on his venture.

[48] These are not the edible figs, but many varieties of the fig family that form an important food for monkeys and birds. In the latter part of this book I have given a list of the more important trees of this forest region.

[49] Professor Sereno Watson, of the Harvard College Herbarium, collected, during two winter months in the Department of Izabal, five hundred species of plants, many of them new to science (Proceedings of the

American Academy of Arts and Sciences, vol. xxi. pp. 456 *et seq.*). Notes of some of these will be found in the Appendix. He collected no less than twenty-five species of palms.

[50] In the Appendix will be found a list of the woods under their local names; but as these vary in the different provinces, it will be of little use in determining the trees from which they are obtained. Rosewood is said to be furnished by at least three trees not connected botanically, and the application of the name “cedar” is as puzzling.

[51] Mr. Coffin, the hospitable magistrate at Punta Gorda, gave me some of the best oil; and in the limited experiments I have tried with it, its properties much resemble those of coconut-oil.

[52] Lahaina, Salangore, Elephant, Ribbon.

[53] Even at nine cents per pound it pays as well as the best Jamaica at fourteen cents.

[54] Cacao: How to grow and how to cure it. London: Prepared by the Jamaica Government.

[55] Compendio de la Historia de la Ciudad de Guatemala, t. 2, p. 95, ed. 1818.

[56] The Colony of British Honduras. D. Morris, London, 1883, p. 76.

[57] British Honduras, p. 100.

[58] The Naturalist in Nicaragua, p. 56.

[59] Compendio, t. ii. p. 94, Concerning the Tepulcuat.

[60] See Appendix for account of the habits of the zompopos.

[61] Dollfus et Montserrat, Voyage géologique dans les républiques de Guatemala

et Salvador. Paris, 1868.

[62] Not for the pseudo-geologists who see glacial action on every bed of recent lava or in every railroad embankment.

[63] Vandegehuchte.

[64] Rockstroh.

[65] Brasseur de Bourbourg, ii. 44.

[66] La Sociedad Económica, No. 6, March 14, 1880.

[67] Thomas Belt, The Naturalist in Nicaragua, p. 71.

Transcriber's Note: image is clickable for larger version



A MAP OF GUATEMALA.

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[*Illustrations are marked by italic pagination.*]

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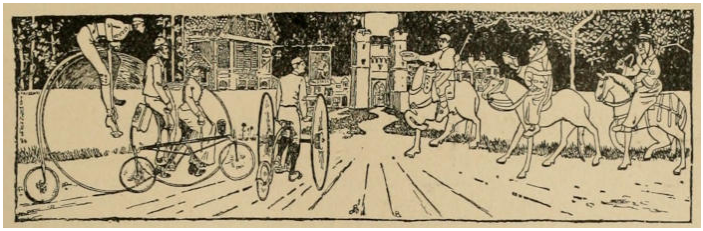
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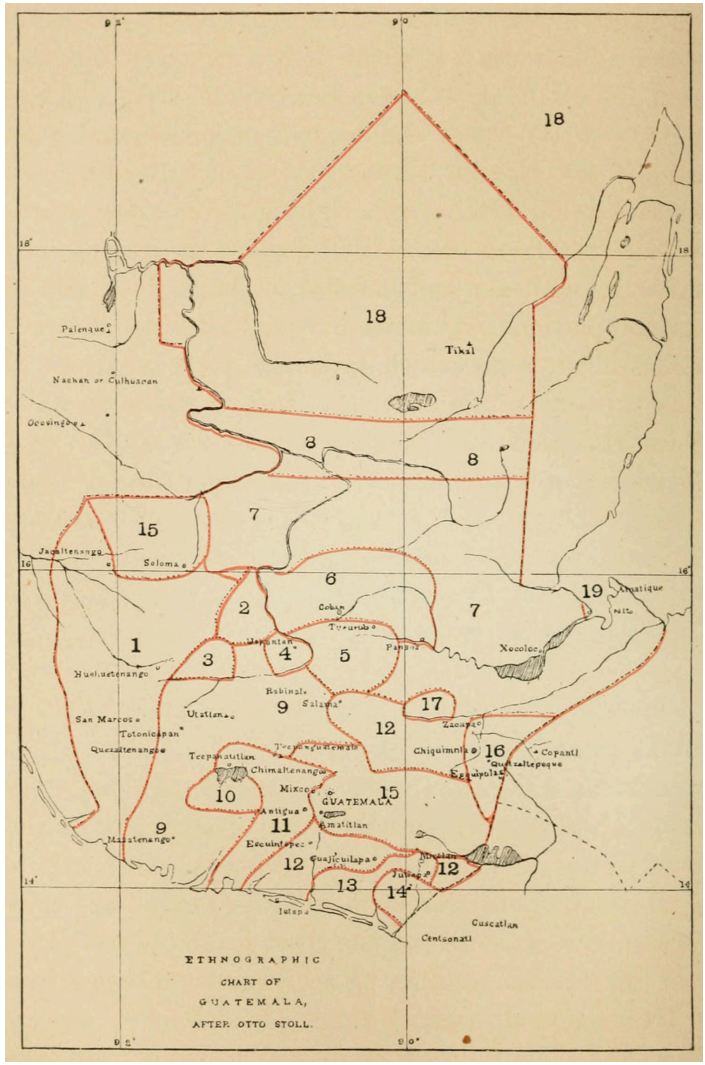
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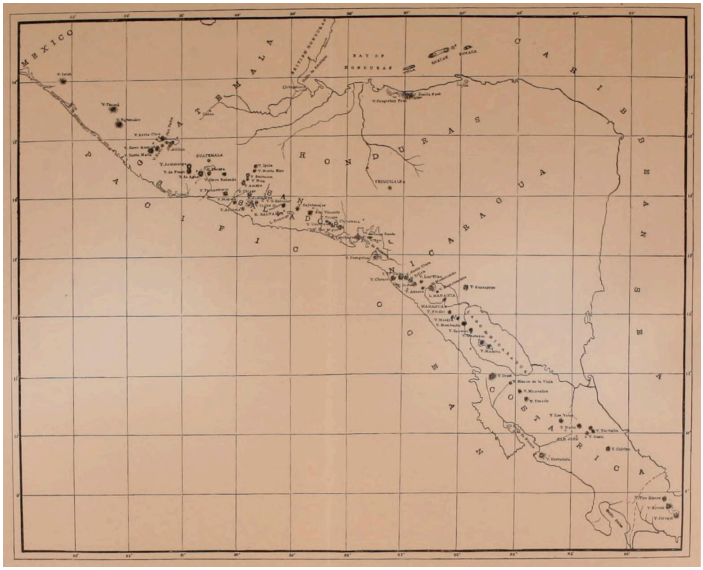
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